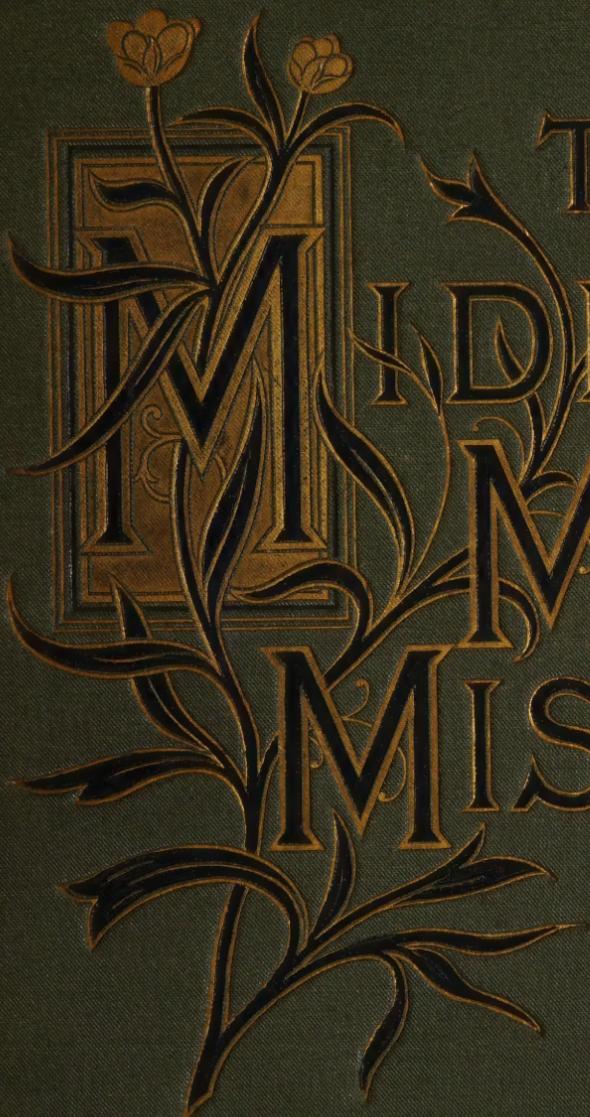




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Our Portrait Gallery.

SIR JOSEPH DALTON HOOKER, M.D., F.R.S.

SIR JOSEPH DALTON HOOKER, according to *Men of the Time*, is the second and only surviving son of the late Sir William Jackson Hooker, Regius Professor of Botany, Glasgow University; subsequently Director of the Royal Gardens, Kew. He was born at Halesworth, Suffolk, June 30th, 1817, and was educated at the High School, and University of Glasgow, where he graduated M.D. in 1839. At the age of twenty-one he accompanied officially as assistant surgeon, but in reality as naturalist, the famous expedition of Sir James Clark Ross, fitted out by the Government for the purpose of investigating the phenomena of terrestrial magnetism in the south circumpolar seas. The result of his researches during this voyage was a series of superb volumes "On the Botany of the Southern Regions, embracing the Flora of the Auckland Islands, New Zealand, and Tasmania." He returned to this country after an absence of four years. In 1846 he accepted the appointment of Botanist to the Geological Survey of Great Britain, under Sir H. De La Beche, and he contributed a valuable paper to the second volume of the *Records* of that Institution, "On the Vegetation of the Carboniferous Period as compared with that of the present day;" and another "On the Structure of Coal Fossils." In 1847 he undertook a journey to India, for the purpose of investigating the plants of tropical countries, and the flora of a hitherto unexplored region of the Himalayas. In the course of his travels in these remote districts he was for some time kept prisoner by the Rajah of Sikkim. He returned in 1851, and published two very interesting volumes of "Himalayan Journals," and a number of scientific works "On the Botany of India." In 1850, while in India, he published some beautiful sketches of rhododendrons from the Sikkim Himalaya, several of which have since been introduced into England. These expeditions, though partly at his own expense, were conducted under the authority of Government, which supplied some of the funds. He was appointed in 1855 Assistant Director of Kew Gardens, and

on his father's death in 1865 succeeded to the Directorship, which he resigned in 1885. He was some time Examiner, in Natural Science, of candidates for medical appointments in the Royal Army, and late East India Company's service, and Examiner in Botany to the London University and Apothecaries Company. In the autumn of 1860, with the late Admiral Washington and D. Hanbury, F.L.S., he made a tour in Syria, during which he paid special attention to the oaks of that country. Dr. Hooker presided over the meeting of the British Association, held at Norwich in 1868. He was appointed a Companion of the Bath (Civil Division) in 1869.

In April, 1871, Dr. Hooker left England for Morocco in company with Mr. John Ball, F.R.S., and G. Maw, F.L.S., his purpose being to collect the plants of that comparatively unexplored country. On the 16th May, with his companions, he made the ascent of the great Atlas, the summit of which mountain has never before been trodden by a European, and at the close of June he returned to Kew, bringing a large collection of plants. In 1873 Dr. Hooker was elected President of the Royal Society, and resigned in 1878, when the late Mr. W. Spotiswoode was chosen as his successor. In 1854 he was awarded a gold medal by the Royal Society. In 1884 the Founders Medal of the Royal Geographical Society was awarded to Sir Joseph Hooker for his eminent services in scientific geography; and, in 1883, the Society of Arts presented to him their Albert Medal for the services he had rendered to the arts, manufactures, and commerce, by promoting an accurate knowledge of the floras and economic vegetable products of the several colonies and dependencies of the empire. Sir Joseph is a member of various learned societies, and a corresponding member of the Institute of France. His works are:—"Botany of the Antarctic Voyage," 6 vols., 4to, 1847-1860; "Rhododendrons of the Sikkim Himalaya," 1849-1851; "Himalayan Journals," 2 vols., 8vo, 1854; "Genera Plantarum," 1862, *et seq.*; "The Student's Flora of the British Islands," 1870; "The Flora of British India," 1874; "Journal of a Tour in Morocco and the Great Atlas," 1878.

Original Communications.

ON A NEW METHOD OF TREATING SKIN DISEASES LOCALLY.

By H. VALENTINE KNAGGS, M.R.C.S., L.R.C.P.

II.

EMULSIFICATION IS THE ONLY PRACTICAL METHOD BY WHICH OINTMENTS AND LOTIONS CAN BE DEFINITELY AND PERMANENTLY COMBINED TOGETHER.

IN my paper on the dermatological uses of permanent emulsions I endeavoured to describe a few of the salient features of that particular line of treatment. I now wish to point out the precise methods by which I arrived at my results, and to direct attention to the manner in which the various constituents of these preparations are built up. In order to effect this purpose it will be necessary for me to commence from the standpoint of my original observations, and to then gradually work up from this until the perfected preparation (as I regard it) is arrived at. Three years ago, when I first began to study this subject, the use of lanolin as a suitable basis for ointments was practically unknown, and the importance of mixing water or medicated fluids with ointments was but faintly realised. The introduction, by Professor Leibreich, of wool-fat, with its remarkable power of absorbing water, gave an immense impetus to this important question. At the present time lanolin ointments, ointments rubbed up with water and lotions, and even mixtures of oil and mucilage—the gum-oil as it is usually termed—are quite in the order of the day, and would naturally lead one to suppose that the tendency of modern dermatology is towards the perfect admixture of an oil or fat with water, to which suitable medicaments can be added or required, or, in other words, the permanent emulsion.

My first experiments were made with glycerine and fatty substances, when employed for the purpose of treating a chapped condition of the skin resulting from cold. I noticed when vaseline or lard was rubbed over the hands immediately after they had been washed in ordinary water, or in a weak solution of carbolic acid or perchloride of mercury, that a marked difference was observable, both in respect to the greasy feeling, and also in the appearance of the mixed ingredients on the hands, than when the oily application alone was used.¹

Anyone who has tried, or who will try, these two methods will not fail to be struck with the dissimilarity existing between them, and to observe the superiority of the former over the latter, both as to the time necessary to effect a cure, and to its greater protecting power as a

¹ This fact was evidently known to the Romans, who brought the practice of oil inunctions to a high state of perfection. It was often customary for the Roman bather to be rubbed with oil before entering the bath. This was in all probability done *in order to increase skin action*. The body was further anointed with rare oils and perfumes at the completion of the bathing process. By becoming temporarily emulsified with the cutaneous secretions, etc., it is quite feasible to suppose that these oils, when so rubbed in, produced a feeling of exhilaration; prevented the bather from catching cold; and served the purpose of a protective coating or dressing, thereby *checking any tendency to increased functional activity of the skin*. Prior to this the same process of oil inunction in connection with the bath was also resorted to by the Greeks of antiquity. In Pope's translation of Homer's *Odyssey* the following marked reference to this practice is found:—

“Sweet Polycaste took the pleasing toil
To bathe the prince and pour the fragrant oil.”

dressing, when applied to a diseased surface, or when used for obstetrical and other purposes. When vaseline is employed in this manner, and is smeared over the skin when wet, it combines with the water or medicated solution to form on friction a temporary emulsion.

All the semi-solid mineral and glycerine fats will contain and hold watery solutions, although, when they are melted by the aid of heat, the latter will become dissolved out. The quantity of water held in suspension, however, is strictly limited, the percentage varying according to the consistence of the fat. Generally speaking, it may be said with regard to ointments that the more solid they are, the greater the quantity of water or of lotion they are capable of containing. It is now generally recognized that combined preparations of this kind prove very serviceable, and often answer better than simple ointments, while many of the ointments in common use, such as ung. zinci, ung. hyd. oxidi rubri, ung. gallæ c opio, etc., are often materially improved, both as regards their appearance and increased efficacy, by the addition of water. In preparing these ointments the medicaments should be well mixed with the water, and the resulting paste incorporated with the fatty substance until a more or less perfect mixture results.

An ointment or ointment-basis can of course be equally well blended with watery fluids and lotions locally, by making use of the affected part of the skin in the place of a mortar or pill-tile. The portion of the surface covered by the eruption being first washed with the lotion, is immediately afterwards smeared with the fat, the two applications being then rubbed together until a kind of lather is formed. A troublesome case of eczema of the fingers, which had resisted all efforts at treatment, was the first case that I treated in this manner, by the use of a simple combination of boric acid lotion with vaseline. In a few days the eruption was completely cured, much to my astonishment. I have treated several other cases of eczema in a similar manner and with good results, but I have now finally discarded this method in favour of the permanent preparations which are in every way superior.

Mechanical emulsions of a fatty substance prepared with a gum may be divided into two classes:—

The Temporary Mixture or Gum-Oil, where the fat being merely suspended by mucilage, separates in its original and uncombined condition on standing, and floats to the surface of the preparation. With a semi-solid fat this separation will also occur when the mixture is heated to the melting point of the fat.

The Permanent Mixture or true Mechanical Emulsion, in which the oleaginous body is subdivided into minute microscopical particles, each of which is enveloped by the emulsifying substance. In this form of emulsion the countless particles of encased oil globules float to the surface of the medium in which they are prepared, not as an uncombined fat, but as a creamy deposit; while the lower strata of the compound consist of water, and not of mucilage, as in the former type of mixture. The latter form of emulsion is, as far as possible, a homogeneous basis, and although possibly it may contain exactly the same ingredients as the other, yet to my mind there is as great a difference between the two as between pure milk (where the oil particles are minutely subdivided and surrounded by casein) and a mixture of butter and skim milk that has been temporarily blended by the aid of heat and trituration.

The unmedicated paraffine emulsion is a thick fluid which definitely retains its creamy appearance, and may be



John B. Hooker.

described as the direct and permanent amalgamation of an ointment-basis (paraffine molle) with a boric acid lotion. When a medicament is added to this emulsion, it will be found that the preparation is then composed of an ointment and a lotion. For example, if oxide of zinc be used for this purpose, it will be seen that the compound thus medicated is constituted as follows:—

Paraffine molle, 1oz.		Boric acid, 16 grains.
Zinc oxide, 2 drams	Gum Acacia, 160 grains.	Water, 1oz.
or		or
Ung. zinci oxidi		Boric acid lotion.

It will be observed in this instance that a zinc ointment is permanently blended with the boric acid lotion through the agency of gum acacia, and that the resulting emulsion is a direct combination of the two.

Using with the simple formula the same medicaments as are ordinarily employed in the preparation of ointments and lotions, it is practicable to obtain an extensive range of local applications, which, although their constituents are built up from ointments and lotions, yet have properties entirely different from either. Moreover, where any drug or chemical, which it may be thought desirable to use with these emulsions, is more soluble in oil than in water, it may be dissolved in the mineral fat previous to its incorporation with the other ingredients, or on the other hand substances freely soluble in water may be added to the fluid used to prepare the compound. By emulsification the particles of the fat are brought into combination with the aqueous fluids used in the process, and are so rendered soluble. The ointment or ointment-basis loses its character when so combined and becomes merged in the lotion, or *vice versa*.

We thus possess a basis for the application of medicaments to the skin, which, on account of its adhesiveness, and complete solubility in the cutaneous fluids, affords an efficient protection against atmospheric influences and injury, at the same time that evaporation from the skin is *impeded*, a condition promotive of cutaneous rest, and consequently beneficial in the reduction of inflammatory action.

THE INFLUENCE OF "NIPPING" UPON HEALTH.

By GEORGE HARLEY, M.D., F.R.S.,

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ALTHOUGH the effects of drinking alcoholic stimulants to excess are well known, and have been often commented upon, little or nothing has been written on the influence small quantities of stimulants have on the human constitution, notwithstanding that by far the majority of men truthfully denominate themselves moderate drinkers, and consequently the greater number of one's patients belong to this category. The reason of this is not far to seek; for it requires but a very little reflection to tell us why the profession as a whole know so little about the matter, seeing that at least four tangible reasons at once present themselves to the mind.

1. In no instances are the effects of "nipping" sufficiently severe to necessitate any special form of treatment in a public institution.

2. That its deleterious influences on the bodily functions are so insidious as, in the early stages, either totally to escape detection, or, what is more common, to lead them to be attributed to some entirely different cause.

3. The effects of "nipping" manifest themselves in such a variety of different forms that, even where their true nature is recognised, the general practitioner has not the opportunity of seeing a sufficient number of any one of them to admit of his drawing conclusions from them.

4. The men who have most experience of the diseases directly traceable to the effects of moderate drinking, are in general merely those who, like myself, make liver and kidney diseases a special study—the liver especially, being the organ of the body which is most effected by alcohol when indulged in within the limits of what is called strict moderation. And next to it the three other organs of the body upon which stimulants in small quantities act prejudicially are the kidneys, heart, and brain. The other organs of the body are, comparatively speaking, but little affected by alcohol taken in small quantities at a time.

The value of this statement will be fully appreciated by a glance at the subjoined tables of comparative mortality in different industries, taken from the Registrar-General's report.¹ For, seeing that the average amount of drunkards is much about the same in all industries—when they are considered on such a great scale as over the whole nation—the effects of "nipping," as it is called, are rendered apparent when we compare the tables of mortality in any one or more particular class of diseases of men exposed, in the course of their trades, to the temptation of taking little drops of stimulants at a time and often during the course of the day, with those of men whose vocations do not expose them to be so tempted. The result is as follows. Death-rate of men between the ages of twenty-five and sixty-five exposed to the temptations of "nipping":—

Men exposed to the temptations of Nipping.	Liver Diseases.	Urinary Diseases.	Circulatory System.	Diseases of the Nervous System.
Brewers	96	55	165	144
Commercial Travellers ...	61	44	100	139
Innkeepers, Publicans, Wine, Spirit and Beer Dealers ...	240	83	140	200

While the comparative death-rate of men of the same age engaged in other industries, not exposed to the temptation of "nipping," is in:—

Death-rate of men not exposed to the temptations of Nipping.	Liver Diseases.	Urinary Diseases.	Circulatory System.	Diseases of the Nervous System.
Farmers and Graziers ..	41	31	84	81
Drapers and Warehousemen ...	35	37	75	109
Printers	28	30	93	90
Gardeners and Nurserymen ...	18	39	82	63

The result here shown is startling in the extreme, more particularly as regards the proportions of liver diseases; which the Registrar-General not inappropriately designates as "appalling," seeing that it is in reality six times greater among men exposed to the temptations of "nipping" than in that of all the other industries combined. The actual figures being:—for brewers, 1361; for vintners and other salesmen of wines, spirits, and beers, 1521; and for waiters and barmen (those most exposed to temptation) no less than 2205! Whereas, for maltsters, who are only concerned with the materials from which the intoxicants are manufactured, and not with the intoxicating liquids

¹ Supplement to the Forty-fifth Annual Report, 1885, p. xxxii,

themselves, the death-rate is only 830! Nothing could be more conclusive of the deleterious effects of moderate drinking on the human constitution than this; for everything in this world being but relative, it is easily seen how a lesser proportion of "nipping," though giving rise to lesser results, must nevertheless cause a proportionate amount of cases of disease to those given in the above tables, in the liver, kidneys, heart, and nervous system.

It is not difficult to understand why the liver, of all organs in the body, should be the most affected by "nipping," when it is remembered that almost every drop of alcohol taken into the stomach is absorbed by the branches of the portal veins, is conveyed directly to the liver, and has to filter through its tissues, ere it can get into the general circulation, and by it become distributed to the other organs of the body. Moreover, as I showed so long ago as 1853,¹ the mere injection of alcohol into the portal vein in dogs is sufficient to disorder the hepatic functions to such an extent as to cause the animals to become diabetic in the short space of from two to three hours. The result of the two following experiments prove this. The first is one of the experiments I had the honour of performing at the Collège de France before a commission appointed by the Société de Biologie.² Into the mesenteric branches of the portal vein of a full-grown healthy retriever dog, I slowly injected 16 cubic cm. (half an ounce) of pure alcohol, mixed with an equal amount of water. And such was the effect of this procedure on the glucogenic function of the liver, that in three hours the dog was found to be markedly diabetic. The most rapid example of the supervention of diabetes after the introduction of alcohol into the portal vein I ever met with, was in the case of a small mongrel adult dog. The quantity of alcohol employed being ten grammes, along with an equal amount of water. In two hours this dog's urine contained sugar. A similar explanation of the reason why the excretion of urea is diminished by alcoholic stimulants might be given, seeing that, as Voit and others believe, it is formed in the liver. Vogel showed that when the liver's function is disordered in cases of hepatic cancer, a very small quantity of urea is found in the patient's urine. Voit's idea is that the urea is formed in the liver by the disintegration of the hæmoglobin of the effete red blood corpuscles. The detrimental effects upon the liver's functions of the direct introduction of alcoholic stimulants into its blood-vessels as above described, accounts, I think, for the marvellous effects "nipping" has on the human liver, as revealed by the Registrar-General's tables of mortality above cited.

The effects of "nipping" upon the kidneys are far less potent than those upon the liver. The cause of this is not far to seek, seeing that a quantity of the imbibed alcohol is eliminated by the breath during its passage in the general circulation, through the lungs, and consequently a much smaller amount reaches the kidneys than what passes through the liver. As, however, it falls to the lot of the kidneys to have to eliminate alcohol from the blood, as they do all other liquid substances, it is easy enough to understand why it should affect them, though it is by no means easy to point out the way by which its deleterious action is accomplished. We know of course that not only the kidneys eliminate the imbibed alcohol (for it is met with in urine), but we likewise know that alcohol, as alcohol, saturates the renal tissue, seeing that I and others have

been able to obtain pure alcohol from the kidneys of persons who have died intoxicated, by the simple process of distillation. The only tangible reasons, however, that we as yet possess for alcohol disordering the renal function exist (1) in the fact of its elimination causing them extra work; and (2) that alcohol increases the renal circulation, just as it increases the circulation elsewhere, and no doubt at the same time causes a corresponding increase in the diameter of the renal blood-vessels by engorgement, and consequent pressure on the inter-vascular tissues. This remark upon the increase of the circulation leads me now to speak of the deleterious action "nipping" has upon the cardiac organ, either in the way of inducing it to become diseased in the predisposed, or in augmenting the diseased condition when the heart is already affected. The reason, I think, is not difficult to understand, when it is recollected that small quantities of alcohol potently increase the heart's action, as is shown by the quickening of the pulse and by the dilatation and engorgement of the retinal blood-vessels. To such an extent too is this actually the case, that Nicol and Mossop found that even two teaspoonfuls of absolute alcohol were sufficient to cause congestion of the blood-vessels of the retina.

Lastly as regards the influence of "nipping" on the brain. Notwithstanding that it is the liver which suffers most severely from the effects of mere "nipping," it is the brain and nerves that are most injuriously affected by intoxication; for alcohol, when considered in the light of a toxic agent is a true cerebro-spinal nerve paralyser, as it not alone suppresses every function of the brain, cerebellum, and spinal cord, and paralyse the sympathetic as well, but it induces true coma, ending in death.

The action of alcohol upon the nervous system, when taken in small quantities at a time, and often, is, I believe, two-fold. Firstly, it acts deleteriously by keeping the blood-vessels on the stretch, and by thus engorging them, causes them to press upon the nerve cells and fibres, and not only prevent the proper performance of their functions, but likewise by preventing them being properly nourished, and thus unable to do their work efficiently. The dilatation of the cerebral blood-vessels here alluded to may be inferred, not alone from the tightness and fulness of the head some persons experience after partaking of stimulants, but from the congestion of the retinal vessels seen by the ophthalmoscope. Secondly, by the remarkable power alcohol possesses, of so acting on the pabulum in the blood, as to prevent it taking up oxygen and exhaling carbonic acid, and thereby becoming fitted for the purposes of nerve nutrition, exactly in the same way, though to a somewhat lesser extent than opium does. This is well shown by the result obtained from a series of experiments I performed on the subject some years ago, a full account of which was laid at the time before the Royal Society, and published in its *Transactions* of 1864, under the title of "The Action of Physical and Chemical Agents upon the Blood, with special reference to the Respiratory Process."

The relative effects of alcohol and opium are:—

In 100 parts of Air.	Oxygen.	Carbonic Acid.	Nitrogen.	Vol. at 0° C. and 1 Metre Pressure.
Composition of employed air ...	20.9	0.002	79.038	20.96
With pure ox-blood	10.58	3.330	86.09	14.91
Ditto plus 5 per cent. alcohol	16.59	2.380	81.03	18.97
With pure calf's-blood	6.64	3.47	89.89	10.11
Ditto plus .005 grammes of morphia	17.17	1.00	81.83	18.17

¹"Recherches sur la Physiologie du Diabète Suéré." Compt. Rend. de la Soc. de Biologie, Paris. Vol. v., pp. 59-61.

²The commission consisted of Professors Bernard, Verdeil, Würtz, and Robin.

A glance at this table suffices to show that alcohol, even in the small proportion of five per cent., exerts a powerful chemical effect on blood, so powerful as to entirely derange one of its most important functions—namely, the function of respiration. The alcohol seems to have acted like an asphyxiant, inasmuch as it has not alone diminished the power of the red corpuscles to absorb oxygen, but to exhale carbonic acid, and that too in the same way, though to a somewhat less extent than morphia does. This peculiar chemical action of the alcohol on the blood nerve-pabulum may be thought to give a reasonable explanation of the paralyzing action of alcohol upon the nervous system, seeing that oxidation is the motor power of all vital action, and in direct proportion to its activity are the manifestations of life accelerated or retarded. Every breath we draw, every movement we perform, every thought we think, is but the outcome of the transformation of matter under the influence of oxygen. If then it be true as above shown, that alcohol possesses the power of preventing the constituents of the blood from being properly oxidized, and thereby fitted for the purposes of nutrition, it is easy to account for its producing the chain of neurotic symptoms already enumerated, terminating in coma and death.

CHOLERA: A PRACTICAL STUDY, AS WELL AS A PERSONAL EXPERIENCE.

BY BRIGADE-SURGEON W. CURRAN, A.M.D. (RETIRED).

(Continued from page 552, Dec., 1887.)

As to that barbarous measure, so beloved of the native practitioner—the actual cautery¹—I have never seen it used, and I am no advocate for a resort to measures in the case of outsiders which I would not inflict on friends or submit to myself. When this disease appears, however, in an epidemic form, in any city or cantonment, the best, or, in short, only

effectual remedies are isolation² and flight. Defoe emphatically says, in his “History of the Plague,” p. 175, that “the best physic against the plague is to run away from it,” and I have sometimes thought that this would also, were it always practicable, which, of course, it is not, be the best physic against cholera. But the former is not always practicable either at home or abroad, and as to the latter, which would appear to have been inaugurated with success by Aurungzebe,² there can be no doubt but that Sir Hugh Rose’s plan—viz., that of camping out, or rather “dodging cholera,” as the soldiers call it, has done more to arrest the progress of this disease and diminish its destructiveness than any other measure we are acquainted withal. Nor is even this without its drawbacks, as so many regiments, or their records, could testify; and I have heard of scenes or sufferings in some of these that would almost tempt one to say that the game was scarcely worth the candle, while not a few have hinted in my hearing that the remedy was, in their cases at least, little if anything better than the disease.

I have already described one visitation of this kind; let me glance at the system from another standpoint, and enumerate some of its drawbacks. If I may judge by my own not very limited experience of these camps I should be disposed to pronounce in their favour; but then that all-pervading element, the weather, happened, though sultry, to be mild and equable on each of the occasions on which I was “out.” The absence of rain prevented that saturation or rather soakage of the surface that is so dispiriting, as well as disagreeable; and the early cessation of the disease amongst us rendered frequent change unnecessary.

When the rain pours down, however, as it so often does in torrents at these times, and turns the loamy surface into a sea of mud, things begin to assume a very different complexion. Then the dripping tent and the sodden floor, the difficulty of drying the clothes and the bedding, of cooking food, or even of standing about without inconvenience, irritates the temper and induces a spirit of discontent and despondency. Add to this the querulous wailing and other unpleasantnesses incidental to ailing juvenile or infant life, within the four

¹ “Wolff,” says Dr. Cooper (“The Travels and Adventures of the Revd. Joseph Wolff, D.D., etc.,” p. 449) “the natives have a remedy which has very frequently succeeded in stopping the cholera, and this is putting a hot iron upon the stomach; and he added, ‘Will you submit to that?’ Wolff said ‘Yes!’ He then branded Wolff three times upon his stomach, which (God be praised!) stopped the cholera, and Wolff began to sleep.” And “the remedy upon which even Europeans relied, in the early days of our settlement at Bombay, was, according to Anderson (‘The English in Western India,’ pp. 132-3), of a painful and barbarous character. A hot iron was applied to the ball of the sufferer’s foot; if he winced it was expected he would recover, but if he showed no signs of pain he was given over by his medical attendants.” He quotes, in a note to the above, a Father Martin as writing in the *Lettres Edifiantes*, tome iv., to the effect that a “Signor Mancuchi . . . had discovered another cure by which he gained vast reputation at the Mogul Court. His infallible remedy was this: Take an iron ring about an inch and a half in diameter, and thick in proportion. Then heating it red hot in the fire, extend the patient on his back and apply the ring to his navel, in such a manner that the navel may be as centre to the ring. As soon as the patient feels the heat—which must necessarily be in an instant (I should think so!)—take away the ring as quickly as possible, when so sudden a revolution will be wrought in his intestines that his pains immediately cease.” Fryer observed (“Account of India,” p. 315) of the Indian physicians of his day that “they apply cauteries most unmercifully in a Mordisheen, called so by the Portugals, being a vomiting with a looseness: the like is done in a calenture.” Dr. Granville treated Lord Palmerston (“Autobiography,” vol. ii., pp. 262-3) for what he called cholera by placing “a long band of thick flannel, four inches wide, over and along the spine, from the joint in the back of the neck down to the upper portion of the sacrum. . . . Over this band he passed lightly up and down a heated flat iron, such as is used in laundries,” and, strange to say, he was not even offered for this “cure,” *alias* this piece of “Priggian” titivation, or tomfoolery, the honour of a knighthood.

² “Clement VI. was so convinced,” says Hecker (“Epidemics of the Middle Ages,” p. 29), of the salutary effect of seclusion that, during the plague in Avignon he kept up constant fires and suffered no one to approach him.” And another case in point is mentioned in a now very rare book, called “Londiniana, or Reminiscences of the British Metropolis,” by Edward Wedlake Brayley, vol. iii., pp. 212-14, which is so curious, not to say so suggestive, that I cannot refuse myself the pleasure of quoting it here. The tradesman here referred to “had a wicket made in his door to take in or send out anything he thought fit. . . . He made it a standing rule that the door should not be opened on any account—fire excepted—and, . . . whenever the wooden window was opened, he caused a flash of gunpowder to be made in the room so as to fill it with smoke.” He also “laid in a seasonable quantity of wines, cordial waters, and brandy, and, in fine, nothing was wanting that the situation he was going into could probably require. His letters were brought to the porter who smoked them with sulphur and gunpowder; then opening and sprinkling them with vinegar, they were drawn up by the pulley and then smoked again with perfumes. The master, taking them up with a pair of hair-gloves, the hair innermost, read them with a large reading glass at a considerable distance, and as they were read burnt them.” He escaped, and as a thanksgiving offering for the preservation vouchsafed him, he “bestowed upon the poor in his neighbourhood the surplus of his provisions, amounting to 1,500 lb. of bread, five hogsheads of beer, 300 lb. of cheese, five flitches of bacon, and some barrels of salt beef and pork.”

² “Grant Duff’s History of the Mahrattas,” vol. i, p. 357. See also in the same direction “Fryer’s Account,” as above, p. 156; Hazlitt’s “History of Venice,” vol. i, p. 245. Mr. (now Sir James) Picton mentions also, if I mistake not, an instance in point in his “Memorials of Liverpool.”

corners of a reeking tent, and you have before you a picture of wretchedness and discomfort for which it would not be easy to find a parallel elsewhere. 'Tis then that the disease finds fitting subjects for its onsets; 'tis then it carries all before it by assault, and 'tis then, too, that

Each diligently bends
Towards common thoughts and things for very fear,
Striving their ghastly malady to cheer
By thinking it a thing of yes or no
That housewives talk of.

Woe be to the man or the woman either who happens to be seized under depressing sights or scenes of this description. He or she will almost certainly succumb under such surroundings, and some of these "casualties" are undoubtedly due to that indifference, I might rather say that weariness of life, that associations of this kind are everywhere so apt to engender or provoke.¹

Some one may here interpose and say, "If such are your views of the situation; if, as you admit, you have nothing tangible to say about it, why write at all on the subject? Or, if you must needs 'deliver your soul' by writing, why do you do so in this gloomy spirit and despairing strain?" That, good reader, is just the question I have asked myself a dozen times at least since I began this little essay. And yet methinks that, though I have no brand-new theory about, or even any infallible remedy to suggest for it, I know as much about it as my neighbours—as much, even, perhaps, as some of those "commissioners" who lately went first-class at your and my expense, to Rome, and who came back with their fingers in their mouths and a long-winded report in their pockets, which will either be pigeon-holed in some Government office, or published in some dreary blue-book that no one will read.

Is not this, or rather, has not this been the end or outcome of all these costly confabulations; and are we any whit nearer a solution of this mystery—for such it undoubtedly is—now than we were fifty years ago? I say deliberately we are not; and I say further that the time has, in my humble judgment, come for us, individually and collectively, to clear our minds of cant and illusion, and acknowledge the limited range of our faculties. Better this than waste our time in cadging about in this way after a cause that has hitherto evaded, nay, mocked at our search, and that may, for aught we know to the contrary, be either a combination or a compound one. Anyhow, no one condition more than another has yet been proved to be so specifically and unequivocally at the bottom of this mischief as to exclude all others; and this being so, would it not be as well to cry Halt for the present, and "recognise the impos-

¹ Based on various information, public and private; and the corps chiefly referred to are the 1st Royals, at Nusseerabad; the 35th, at Agra; the 36th, in the Peshawur Valley; the 51st at Meer-Meer; the 52nd, at Gwalior and Jhansie; the 58th, at Allahabad; about which Dr. Ambrose has written so well, and the grave-yards of India tell tales of this kind which it is impossible to ignore. Mr. McCrae assured me that he buried eighteen men of the 36th one evening at Peshawur; and I copied the following myself off a memorial stone at Meerut, that commemorates the loss by this disease—chiefly, I think, in camp—of the "Buffs":—"To the memory," etc., "of—officers, 2; colour-sergeants, 3; sergeants, 3; corporals, 6; drummers, 14; men, 111; women, 16; children, 43." Nor have these conditions escaped the notice of others. Dr. Munro alludes to them. After mentioning that "within twenty-four hours the command of the Regiment developed upon four different officers," he adds that "here (in camp), too, it was that all, with scarcely an exception, laboured under the influence of choleraic poison, or, at least, sensations not only peculiar, but in many instances distressing," and had rain supervened at this time the situation might have been terribly, perhaps irremediably, complicated and emphasized.

sible—the unreasonably difficult?" It may disappear in time like its mediæval congeners, and make no sign. If so we will bid it God-speed, and ask no questions. *Solvitur ambulando* is not, after all, a bad way of settling difficulties of this kind; and if that country is to be congratulated that has no history that art may assuredly rejoice that has witnessed the decay and survived the burial of its worst, or least accessible enemy.

"It is a favourite subject of declamation," says Dr. McKinnon, "to decry filth and smells as the sources of fever, but there may be fever without filth or smells, as there may be filth and smells without fever;"² and if you substitute cholera for fever here these words will apply to the one as much as they do to the other. Speaking for myself, I would say at once that so far as my observation went on the spot filth and smells had little or nothing to do with either the origination or the diffusion of this disease, and that if it kills most people where these do most abound it is because there are more people to kill off there than there are in more favoured regions.³ A very similar remark will apply to the agency of water in the causation or prolongation of this disease. I saw no instance of its operation in either of these directions that could stand the test of a rigid scrutiny, and if contaminated water is the cause of it I do not understand how it can be absent at any time from the plains or cantonments of India.³

¹ "Annals ut Supra," No. 5, p. 136; and he might have added, with the character in Beaumont and Fletcher's *Prophetess*—

Nor is cleanliness (always)
A saving antidote to keep one from
This deadly poison.

² Depreciating the regret that was expressed by a friend of hers about her returning to town during the prevalence of this disease, Mrs. Sarah Coleridge says ("Memoir and Letters," p. 315) that "I, for my part, believe that the cholera atmosphere is all over England, and that the complaint kills off most people where there are most people to kill, and in the most unfavourable circumstances in regard to diet, clothing, and the air of their dwellings;" and this is, in sum, the view I have been urging all along.

³ Dr. Furnell, of the Madras Army, has written a letter and a book since these sheets were placed in this printer's hands, in which he advocates the water-pollution theory of the propagation of this disease. Others uphold similar views, and the instances of the Broad-street pump of 1854, as well as of the East London outbreak of 1866 are familiar to all. These occurrences are said by some "to be decisive in English opinion as to the water question," and its relation to the diffusion of this disease. Be it so, I will not now argue the question, or even go into any detail—controversial or otherwise—on the point. All I here mean to do is to mention a few facts, ask a question or two anent these, and then leave my readers, as is my wont, to draw their own conclusions. There are, according to all accounts, upwards of two hundred millions of souls in Hindustan, and it is well known that water is the only succedaneum for paper, earth, etc., these use "for their occasions." There are no closets—so far as I could see—anywhere outside the Presidency or other large towns, and yet it is notorious that the tanks, the reservoirs, and the kutchas (unbricked) wells that surround the country villages are freely resorted to for natural purposes by the inhabitants. Moreover, several of the rivers of that country, and notably so the Ganges and the Godavery, the Jumma, and the Nerbudda, etc., are sacred, and it is well known that the water of these streams is carried for ceremonial or sacrificial purposes to every Hindu house in Hindustan. Aye, and far beyond it, and yet, good reader, the country is not depopulated. Far from it, indeed, the soil is thickly, densely in some quarters, populated, and there are scores, nay, hundreds of your countrymen in that quarter who never see a case of cholera. Does this not strike you as, at least, odd, or does it not occur to you that if polluted water were the cause, the originator and diffuser of the disease, the Punjab and the Deccan would have been long since shorn of their fertility and turned into howling Gobis and Saharas? But then this theory meets, it is said, so many difficulties, it solves so many heretofore insoluble riddles that we ought for this, if for no other or higher reason, to accept and admire it. Be

Human agency meaning thereby migrations of human beings, or importations of diseased articles of bedding or clothing¹ from "infected" areas, have been so frequently coupled with the introduction of this disease that it would be presumptuous in me to question it. I think, however, that whenever there is a proper disinfecting or cleansing apparatus available, those articles only should be destroyed that have come into direct contact with the body, or that have been saturated with the discharges. Fire is, in either case, the best solvent, and in no disease is cremation more called for than in this. That experienced veteran, Dr. John Murray, described the disease as "spreading (in his day) like a wave over the Punjab and the North-West, generally along the line of commerce;" and Dr. Cayley looks upon the pilgrims as its "chief carriers" in Orissa. This is the prevailing opinion of all those observers of its movements I have conversed with in the East, but it sometimes ignores these media or anticipations, and advances or recedes irrespective of them as best suits its own sweet will or convenience.

There is, in either case, no occasion for a resort to that old fond illusion of our fathers, the "Angel of Death," or the "Wings of the Wind" theory. Neither need we assume that the malady is conveyed by contagion or infection in the ordinary acceptation of these terms, and I saw no instance at all in which a seizure could be justly said to "depend on the agency of touch, or on an atmosphere tainted by emanations from the bodies of the sick."

This is, after all, it may be said, but a very "lame and impotent conclusion." Be it so, I can offer no better. I can neither explain the inexplicable, nor draw "conclusions" from the clouds. All I can say is that I have "sat by the cradle" of more than one outbreak of this disease, and "followed its hearse," and that, in my humble opinion, no amount of Macdougall's powder or carbolic acid, no sanitary cordons, land quarantines, lazarettoes,² or even cholera commissions will stop the progress—once 'tis on the move—of a disease that has passed as easily over the peaks of the "frosty Caucasus" as it has over those of Devalagiri and

it so, again I say, these gentlemen have just as much right to their opinions as I have to mine, and several of them had far wider fields for cultivating or forming these than I had. All I claim is that I have studied the question to the best of my ability on the spot, and that I came to the conclusion, through that study and that judgment that God gave me, that there is just as much relationship or connection, and no more, between cholera and contaminated water as there is between a hawk and a hand-saw, or better, perhaps, between the Goodwin Sands and Tenterden Steeple.

¹ "I have known cholera to be communicated," says Dr. Richardson ("Diseases of Modern Life," p. 458), "by the clothes of the affected person to the women engaged in washing the same;" and there are several allusions to this subject in connection with the outbreak of 1831 in the "Greville Memoirs at Supra," vol. ii., pp. 157, 193, and also 216-17; as well as in the "Sanitary Departmental Reports" passim.

² Dr. Cunningham has effectually demolished this fgment in his "Twelfth Report" for 1875, p. 48, and, I dare say, subsequently. "The persistence," says Dr. Munro, "with which the disease hung about the regiment, its complete disappearance so often, only to return again with increased violence, even though, to endeavour to avoid it, we vacated building after building in which it appeared," was very depressing; and readers of Kinglake's "Invasion of the Crimea," vol. iii., p. 21, will remember that "the cholera had proved to be a pestilence which was not to be warded off by the stir and glory of battle." He adds in a note that "Captain D'Acres and his captain of the fore-castle alone took out from the tents the corpses of twenty-eight men who had died of this disease during the night," after the battle of the Alma, and any one can surely see from these facts that cholera is a disease, *sui generis*, that recognises no other master but its own sweet will and pleasure, and that will not be gainsayed in its course.

Mount Everest, and that slays as vigorously on the frozen shores of Kamskatka and Labrador as it does on the Coromandel coast, or even at the Soonderbunds, near Chittagong.

This being so, it only remains for me to renew my expression of distrust in the use of drugs in the advanced stages of this disorder, and ask the reader who has accompanied me thus far, to look elsewhere for his remedy. This remedy lies, if I have not misinterpreted the records before me, in (1) endeavouring by all the means in your power in preventing the attack; (2) in nursing it well when it comes. The hot bath and recumbency in a warm bed followed by some carminative or astringent draught will conduce towards the attainment of the former object, for in no complaint is the advice, *principiis obsta sero medicina paratur*, so valuable as it is in this, and in no other illness is good nursing so necessary. To this we must look for such "cure" as is attainable in this malady, especially so in its algid stage.

A distinguished countryman of mine wished that it should be recorded on his tomb that he "fed fevers." If I might presume so far, I would advise you, good reader, to take up a similar view of your responsibilities in this respect, and act on the motto "he nursed cholera." Do not, my friend, allow calomel or other nauseous compound of that description to stick to the tongue or teeth of your helpless patient; and do not, in obedience to any fantastic theory, allow him or her to be scoured on or off the close-stool into eternity through castor-oil, or other drenching stuff of that kind. For 'tis the purging, like the pace, that kills; the vomiting is, comparatively speaking, of lesser consequence. Let him or her have your best sympathy, as well as your kindest encouragement, and do not withhold from either in their agony that harmless drink he or she most covets. Remember further, that though the attack may not kill straight off, it paves the way for such a state of debility or reaction as necessarily implies a lingering convalescence, if it does not actually endanger human life. He alone, in my opinion, will best combat this latter condition who knows best how to stay his hands betimes, or who trusts most to the regulated powers of nature.

APPENDIX.

As the papers quoted below confirm in the main the views propounded by me in this essay—while they have come to hand after it was written—and I am anxious that it should be as complete as possible, I will reproduce them in full, and allow them to speak for themselves in connection with it.

I.—Mr. Lawrence (who was at the time here referred to an officer in H.M.'s 51st Regiment) assured me subsequently—and I am transcribing his own words—that the marching out of his corps, on the occasion of its terrible visitation of 1861, rather aggravated than diminished the helplessness and despondency of its members. Many of the men, he assured me, threw down their arms or accoutrements on their slow march from Mean-Mear to Chebale, from sheer inability to carry them, and some of them even lay down by the wayside to die. He assured me that several women and children died of exhaustion in the doolies that carried them, and when rain came on all these sufferings were enhanced, while others were added to them. He added that the cholera first made its appearance among the men of the company that was stationed in the Artillery lines, and that the authorities brought these into the midst of the healthy men, instead of sending them out at once into camp, as they ought to have done. The disease was in this way diffused in the barracks, and he had also an impression that the drinking water was—or rather, might have been—contaminated with feculent matter by percolation from a neighbouring closet. He could find no other or adequate cause for such an explosion as this was.

II.—Answering some questions I put to him on the subject, Dr. J. J. Clarke, of the Bengal Army, wrote to me as follows at Peshawar, in 1868:—"A severe thunderstorm burst over the encampment of the

pilgrims at Hurdwar (three millions in number) on the night of April 11th, 1867, and cholera made its appearance among them on the following afternoon. Before the 11th the camp was supposed to have been free from the disease. I am induced to think that a cycle of choleraic air struck the pilgrims—not that the seeds of the disease lying dormant in the ground of the encampment were vitalised by the rain. Epidemics in this country go very far to shake one's faith in the contagious nature of the disease; and they would, I believe, even tend to establish the theory of its non-contagiousness. The experiment of 'encamping out' was, so far as this valley (Peshawur) is concerned, rather more of a failure than a success in 1867. I do not despise quarantine, because I believe that great *indirect* good may arise from it. There is not a vestige of evidence, in my opinion, to prove that cholera was imported by the pilgrims into this garrison last year. I have made much inquiry on this point in the city. I have examined police records, and had much conversation with Hukeems (native doctors), and I believe that this garrison was struck by the disease just as the pilgrims themselves were struck at Hurdwar. The disease did not *creep* into the valley; it struck the Europeans in cantonments first, and the blow came down like a sledge-hammer, suddenly and fiercely, upon the Artillery and the 42nd Highlanders the same day."

III.—The following remarks were embodied by myself in one of the statements I had to prepare for the authorities of my department, but it was withheld at the last moment to save an interminable correspondence on the point, and also because it might possibly be regarded as in some measure a censure upon the organisers of this system:—"This would perhaps be the proper place to allude to that plan of camping out during epidemics of cholera which was recently introduced by Sir Hugh Rose, and which has been so much acted on of late years in this country. I intended discussing the subject in some detail, but that this paper is long enough already, and that, moreover, a late judicious general order has so modified the situation as to deprive it of much of the worry and unpleasantness that formerly attached to it. The obligations of frequent, if not, indeed, daily change which the first order seemed to imply rather than enforce has been dispensed with, and the discretion of the commanding and medical officer has been relied on instead. The principle was good, but as in all similar instances of supposed panaceas, the details of it were worked to death, and the families were so harassed in many instances that they hated the very name of the thing. No wonder, for they sometimes lost all their bedding or other belongings, and endured such other inconveniences as can only be realised by him who has witnessed them on the spot. Among these must be included the loss of several children by meningitis or marasmus, and I believe myself that sunstroke and dysentery have numbered more victims under this system than they have ever done in this country before."

IV.—As the question of inoculation for cholera may again crop up at any moment, while the following letter alludes also to a danger from cholera—viz., live burial, that has not been sufficiently dwelt upon, in my opinion, by systematic writers, I subjoin it, and leave it to speak for itself:—

INOCULATION FOR CHOLERA.

To the Editor of the St. James's Gazette.

SIR,—With reference to Dr. Murray's letter on this subject in your issue of the 15th inst., allow me to say, as the result of my own personal experience on the spot, that one attack of cholera forms no protection against a second seizure or recurrence *de novo* of this disease in the same subject. Proofs in point may be easily procured. More than one case of the kind occurred within the sphere of my own cognizance, and one of these especially made such an impression on me as I am not likely to forget. The man in question belonged to the elephant battery, a portion of which is fixed at Peshawur, and he acted as my own orderly during the time that I was attached to the hospital of that corps (the Royal Artillery) at that station. He assured me several times, and others confirmed this statement—it was, indeed, generally known there—that he had been sent on a previous occasion, and as the result of a seizure like that of which he subsequently died under my care, to the local dead-house, to await, along with other corpses, his turn for interment. When the attendants came to remove the bodies on the following morning, they fancied they noticed, as they were lifting him into his coffin, some signs of life in him. They sent for the apothecary of the day, accordingly; and this officer, having employed the necessary measures (including friction and brandy), had the satisfaction of so far restoring him as to be able to order his return to bed. He died, as I have just hinted, of a second attack under my care; and you are, of course, aware that *post-mortem* muscular contractions—some of which closely simulate life—are commoner after death in this disease than, if I except yellow fever and one or two others, they are in any other that science is acquainted with.—I am, Sir, your obedient servant,

August 16th, 1885 (?)

W. C.

P.S.—I may add that, as the result of this and other similar experience of this disease in its home, I am entirely opposed to inoculation as a prophylactic or otherwise against cholera. The process is, in my humble opinion, useless, dangerous, and deserving of nothing but reprobation and censure.

V.—Dr. Pringle's valuable experience of this disease has been laid before the profession since this paper was written, and I was more than gratified at finding, on perusing his paper, how entirely we agreed as to its leading features or peculiarities. I can testify, from personal enquiry and observation on the spot, that cholera has never appeared at Mussoorie or in the neighbouring hills except when it was imported into them from the plains, and his views as to the dispersion or diffusion of cholera by the pilgrims from Hurdwar in 1867 and 1879 accord with those generally entertained on the point in India. His emphatic condemnation of sanitary cordons and land-quarantine is worthy of all acceptance. So is his belief that cholera "is most certainly neither contagious nor infectious in the strict sense of these terms;" and as to his remark that "nursing is the sheet-anchor in cholera, and should be persevered with . . . till death has undoubtedly claimed its victim"—have I not said the same thing over and over again, or acted on the principle involved in it, throughout my whole career? His story of the soldier who "had been put with a pickaxe and a spade into a stretcher, to be buried at the next halting ground," but who was found sitting up when his comrades came up for this purpose; as well as that of the Bengal civilian—still alive—who "heard the order given for his coffin," supports my experience as above, and I quite think with him that "dead-houses (in and out of India) could tell (even) sadder tales" than these. But I cannot, for obvious reasons, continue this criticism. I will conclude, accordingly, by observing that he too insists, like myself and others, upon the occurrence of certain atmospheric conditions as "among the conditions necessary for the development" of a seizure or outbreak of this kind; and he assumes also, like myself and many other observers of the vagaries of this malady, that where these conditions are present "every effort may, and in many cases will, fail to keep out the disease."

VI.—The following remarks, which relate to the manner in which this disease is conveyed or propagated in the "Hills," are from the pen of that experienced traveller and pioneer, the late Frederick Wilson, *alias* "Shikari" Wilson, *alias* "Mountaineer," whose "strange eventful history" and painful death I have glanced at in the *Lancet* of April 24th, 1886, p. 808. They will explain themselves:—"In the spring of 1875 I was (says my friend) in the Deyrah Dhoon, and had a lot of hill men with me. One came from his house in the interior (in April, I think) to see his two brothers, who were in my service as chuprassie and bearer (messenger and valet). He remained with our camp about a week, and then accompanied us to Mussoorie. A few cases of cholera had occurred at Deyrah and Rajpore, and two days after reaching Mussoorie this man was attacked and died in the local Dispensary Hospital five days after admission. One of his brothers had nursed him while under treatment, and after the man's death he and the other brother went to their home in the hills, which they reached in four days. Three days afterwards the younger brother, who had been the nurse, was attacked with illness, and died six days after. The family was a numerous one, consisting of some fifteen members, and two more of them were attacked and died, but no others in the village. In the meantime cholera had been severe in Deyrah and Rajpore, particularly so in the latter place, and many deaths had been the result.

"As usual at this time of the year, when people are going uphill daily for the season, a great number of Puhâries (hillmen) had congregated at Rajpore as porters, and when deaths became frequent, most of them left, and went to their homes in the interior. Many of these men were attacked with cholera on the road. My son, who left Mussoorie for Gangoutree at the same time, saw five corpses on the pathway's side during his three first marches. One of his men was attacked, and cured with camphoriva. Others of those who came from Rajpore were attacked after reaching home, and a few of the inhabitants of the valleys in which they resided were also seized; but the disease did not spread to the other villages in the neighbourhood, and this, too, though these latter were not only very dirty, but they were also hot and sultry. We may conclude, therefore," he continues, "that there is something in the surroundings of this part of the Himalayas that is highly antagonistic to the spread of cholera;" and we may also, I think, admit so far, but no farther, that this disease is at times, and under favouring circumstances, thus conveyed by human agency. How that "conveyance" is effected—whether through the clothes, the breath, the skin, or the excreta—I do not know, neither does anyone else, and having thus exhausted my own stock of personal views or reminiscences of this subject and situation, I withdraw from both, and leave my readers to draw from these such inferences or conclusions as appear best to themselves. *Val.*

THE SANITATION OF CAIRO.

BY DR. GREENE PASHA,

DIRECTOR SANITARY SERVICE, EGYPT, ETC.

CAIRO, according to the census of 1882, has 374,838 inhabitants, as follows:—

Natives with fixed habitations	352,416
Bedouins, semi-sedentary	772
Europeans	21,650
	<hr/>
	374,838

The death-rate per 1000 is thus returned:—

1880	46.02
1881	39.74
1882	47.92
1883	63.98, cholera.
1884	45.39
1885	49.76
1886	47.22

It is needless to point out that these figures represent an excessive mortality; but on the other hand it must be noted that the population is generally thought to be understated in the census, in which case the apparent death-rate should be lowered in proportion to the increase of population.

The subsoil of Cairo is composed of alluvium to an unascertained depth, through which, when the Nile is high, the water percolates to within a foot or two of the surface, flooding cess-pits and basements, and converting all depressions into stagnant pools. There is little or no fall in any direction, so the problem of adapting any system of sewerage is one of exceptional difficulty. At present five separate and distinct sewers of modern construction exist in Cairo. They are distributed as follows:—

1. Ismailia Quarter, ending in the Ismailia Canal.
2. Abdine Quarter, ending in the Khalig.
3. Sharia Mehomed Ali, northern half, ending in the Khalig.
4. Ditto ditto southern half ditto.
5. Ministry of Finance, ending in the Nile.

The whole of these sewers, therefore, are intended to discharge their contents into the only source of water supply in the country—*i.e.*, the Nile and its derivatives. This, in principle, is entirely unjustifiable, and alone should suffice for their utter condemnation as drains. As a matter of fact, however, owing to faulty construction, absence of means for flushing, fissures in the masonry, and unauthorised communication of house drains, these so-called sewers and the soil surrounding them have attained such a degree of foulness as to render them veritable "*foyers d'infection*," as well as the source of the noxious smells that exist perpetually in their neighbourhood.

Besides these modern sewers, there exists also a large number of ancient conduits, whose course is entirely unknown, but which are constantly come across when foundations for houses are being dug. When this occurs, the "fortunate," proprietor immediately makes use of the pre-historic drain as a cess-pit, and thus recklessly runs the risk of poisoning not only his neighbours, but even, it may be dwellers at a considerable distance.

The five modern sewers above mentioned provide for the removal of sewage from a very small portion only of Cairo, for in the vast majority of houses cess-pits for reception of the night-soil exist. A few of these cess-pits are constructed with walls of impervious material, and are situated outside the main walls of the houses; but the greater number are simply holes dug in the ground, occasionally lined with porous masonry, but never floored,

and for the most part placed either entirely or in part *within* the buildings. Owners of houses advance as a reason for this atrocious system, that cemented cess-pits get full too quickly and require constant emptying, whereas if left uncemented, the sewage sinks into the ground, and is thus got rid of without trouble. Moreover, say they, to clinch the argument, this is the system that has always existed, so why should there be a change?

It is, I think, an admitted fact, that of late years the climate of Cairo has undergone a great change; that the air, instead of being extremely dry, is often—especially in winter—excessively moist. Into the causes that have led to this change it is unnecessary here to enter; what concerns us is the fact that owing to this humidity the soil no longer has the power of oxidising, and thereby rendering innocuous, the organic matter of sewage which it formerly possessed. The subsoil surrounding uncemented cess-pits has thus become surcharged with putrifying animal matter, to an extent which cannot but re-act on the public health, and which in my opinion has been the cause of the late widespread epidemic of ephemeral fever, a fever happily of slight pathological importance on this occasion, but of vast significance as a warning of what we may expect should prompt measures not be taken to obviate its return at an early date in an aggravated form, or even perchance in the shape of a pestilence. The more modern houses in Cairo have had a system of water-closets engrafted on to the old established cess-pits. Nothing could well be more insanitary than this, for the more fluid there is used, the more danger there is of soil contamination; and moreover, through defective trapping and absence of ventilation, the chances of sewage gas escaping inside the house are immensely increased when closets are multiplied all over it, instead of being relegated to the most out of the way corner.

There are in Cairo about 282 mosques, to most of which are attached public latrines. These latrines are, without exception, constructed on defective principles, and such of them as do not drain into the Khalig or Nile, are connected with percolating cess-pits of the worst type. In the interests of public health it is the absolute duty, I respectfully maintain, of the authorities to take the necessary measures for remedying this evil.

What is generally considered the most insanitary thing in Cairo is the Khalig, which runs through the most densely populated portion of the city. It consists of a narrow cutting, about 6,000 yards long, and, except at high Nile, is nothing better than a stagnant ditch, into which numberless short drains from mosques and private houses discharge their contents. In the summer the Khalig becomes completely dry, except in a few places where filthy pools remain, being fed by the above-mentioned drains. As soon as the Nile reaches a certain height, the Khalig is filled by the cutting of a dam, all debouching drains having been ordered to be previously hermetically closed. The resulting stream is allowed to flow for a few days, and when all the accumulated filth of the previous seven or eight months is supposed to have been swept away, the inhabitants fill their tanks, and thus lay in a supply of water to last them till the next high Nile. This is the theory; but as a matter of fact the debouching drains are not hermetically closed by any means, and as long as water remains in the Khalig—even though stagnant—the poorer inhabitants, who have no tanks to fill, resort to the Khalig for their daily supply.

To improve the sanitary condition of Cairo, and convert

the Khalig into what it was originally intended for—namely, a pure stream instead of a foul ditch, many plans have been suggested, but all have proved abortive on account of the expense they entailed.

The following method of draining Cairo, proposed by Messrs. Cornish and Wallace, should meet every requirement, and in a very short space of time render the capital of Egypt one of the most healthy cities in the world.

To establish a complete system of drainage in Cairo it will be necessary to expend a sum of £480,750.

This system would include the establishment of a network of iron pipes, communicating with automatic watertight cess-pits, by means of which all fecal matter and refuse water would be aspirated from houses into four central reservoirs, to be thence propelled on to the waste land to the south of the city, where a sewage farm could be advantageously established. The cost of working this system would amount to £10,412 per annum.

In case Government should feel disposed to entrust this work to a company, the expense would be as follows:—

Cost of working	£
Interest on £367,700 (cost of network and machines at seven per cent.)	10,412
Sinking fund	25,739
	5,515
	41,666
Interest on £113,050 (cost of watertight cess-pits)	7,910
Sinking fund	1,713
	9,623

Grand total, £51,289.

There are said to be 54,000 houses in Cairo. A rate of £1 per house per annum would consequently suffice to pay for the removal of all filth, and provide for redemption of capital.

NOTE ON THE USE OF GALVANISM IN THE TREATMENT OF UTERINE DISEASES.

BY GEORGE ELDER, M.D.,

SURGEON TO THE SAMARITAN HOSPITAL FOR WOMEN, NOTTINGHAM.

At the present time, when medical attention is being directed to the electrolytic treatment of uterine myomata, more especially by the work and writings of Apostoli, it may be instructive to consider his method of application, and what he claims for it, and also what others are doing in the same direction, although not always on the same lines. I cannot do better than give, in Apostoli's own words, the manner in which his method differs from, and is superior to those hitherto practised.

In the *British Medical Journal*, of October 1st, Apostoli is reported to have said, at the annual meeting of the association, that "I have supplanted the old way of operating by a method which is—1. Precise, by the introduction of new galvanometers of intensity, exact counters and measurers of the electric current, etc. 2. Energetic, by an absolutely novel service of high intensity of current, which I have progressively carried according to the necessities of my cases, from 50 to 150 and 250 milliamperes. 3. Tolerable, in spite of the enormity of these doses, in consequence of the introduction of a new form of electrode, the wetted clay, which renders the cutaneous pole innocuous, and permits us to transmit through it, easily and without injury, a current of signal medical intensity. 4. Better localised, by a direct application of the active pole, by way of the vagina to the uterus, either in its cavity or in the substance of the fibroid deposit. 5. Thoroughly under control, by the exclusive choice of the unipolar method, etc. 6. More scientifically

exact, from the due appreciation of the topical effects of the two poles, and the precise chemical and anatomical indications peculiar to each of them."

Further on he says:—"The positive pole will be the remedy *par excellence* in cases of bleeding or hæmorrhagic fibromata," and "the negative pole will therefore be found to render invaluable benefit (though with the positive pole it is possible to arrive at the same point by a way more indirect and tedious), in those cases of fibroids accompanied by amenorrhœa and dysmenorrhœa, which are only too often the despair both of patients and medical men without such means at their command."

The battery used is after the Leclanche pattern, with large cells, and is of necessity a fixture. When by reason of atresia, or such an amount of uterine displacement as one often sees in conjunction with myomata, the sound cannot be introduced, then galvano-puncture is indicated; or when it is desired to shorten the treatment by combining it with intra-uterine applications. For galvano-puncture a steel trocar is used, which is passed into the most prominent part of the tumour, usually in Douglas' pouch, to the extent of one or two centimètres. For intra-uterine cauterisation Apostoli uses a straight platinum-sound, with insulated sheaths of various lengths, connecting this by means of a rheophore with the positive pole when the myoma is of the hæmorrhagic variety, and with the negative in all other cases, and always for making a galvano-puncture. During the five years Apostoli has been working at this subject, he has made 5201 applications of galvanism upon 403 private and dispensary patients, for a variety of gynecological ailments, with two deaths, although it is only fair to him to say that these deaths are attributed not to any fault in the method, but in one case to a mal-diagnosis, and in the other to intra-peritoneal mischief, originated by too deep a puncture. Included in the above number are 278 cases of "fibromata or hypertrophy of the uterus in some manifest degree," and of these Apostoli states that when his advice has been acted upon, permanent benefit has been obtained in ninety-five per cent. Broadly, he claims for his method the power of averting hæmorrhages, relieving neuralgic and pressure symptoms, in many cases arresting the growth of the tumour, and in some producing a marked diminution, with occasionally its disappearance, improving the general nutrition of the patient, with practically no danger to life or interference with the ordinary avocations. At the beginning of this year, Dr. Woodham Webb, of Paris, made known to us through the medium of the *British Medical Journal*, Apostoli's work, and myself and others journeyed to Paris to witness this new development of an old and hitherto unsatisfactory therapeutical agent. Every facility was afforded his critics by Apostoli, and so impressed were those who went, by the promise which the treatment offered, as well as by the honest, thorough manner in which his work was done, that many came away determined to give the method, in their own practice, a fair trial. The time is yet too short for those of us who are working at this subject to put before the profession authoritative testimony with regard to its value, partly because cases suitable do not occur every day, and partly because to get the full measure of benefit the treatment must be continued for a considerable period. So far as my experience goes, its efficacy has been proved in arresting hæmorrhage, in the relief of pain, and the improvement of the general health; but so far, I can only point to one case of uterine myoma where a decided diminution in size has

taken place; in this case the tumour had decreased quite one-third. I have seen enough of the treatment, and heard enough of it in the practice of others, to show me that its careless exhibition may be followed by most alarming consequences, and that if its value is to be properly tested, not only should something more than an elementary knowledge of medical electricity be acquired, but also familiarity with the diagnosis of uterine diseases, and the manipulations required in their treatment.

In the February and March numbers of the *American Journal of Obstetrics*, Cutter, of New York, gives the full text of fifty cases of uterine myomata, treated by galvanism, and in several material points his method differs from Apostoli's. He uses a Stoehrers' battery, capable of giving a direct current of twenty-seven ampères, and electrodes of the shape of an ordinary surgeon's director with the points and edges sharpened, attached to a long ebony handle. Unlike Apostoli, Cutter, in nearly all his cases, gives the patient an anæsthetic, and pushes *both* electrodes into the substance of the growth, usually penetrating the abdominal wall, unless the tumour is wholly pelvic, when vaginal or rectal punctures are used, carefully avoiding strongly pulsating vessels. The application lasts from three to fifteen minutes, the first being always short; and should symptoms indicative of profound shock supervene, the treatment is at once suspended. Several days' rest in bed is imperatively required after each operation. His results read as follows:—Cured, eleven; relieved, three; arrests, twenty-five; non-arrests, seven; fatal, four, or a mortality of eight per cent. It requires hardly to be pointed out how enormously this mode of applying galvanism differs from Apostoli's, and those only who are acquainted with abdominal surgery can appreciate the danger of thrusting electrodes through the abdominal wall into a myomatous growth. To my mind it is infinitely more hazardous than the performance of hysterectomy, and without the certainty, if successful of curing the patient. Objectionable as the abdominal puncture is, still more so is the rectal, where the conditions, according to our present notions of surgical fitness, spell disaster. To those interested in this department of uterine therapeutics, I commend a careful reading of the original papers, as a valuable lesson in how not to do it.

Up till now, surgery, whether by means of the major operation of extirpation of the growth, or removal of the appendages, has not had such a brilliant record as to justify us in neglecting any means which hold out the prospect of benefiting our patients without mutilation or risk, and no doubt the profession at large will be content to suspend their judgment upon this new departure, until a sufficiency of material has been accumulated upon which to base an impartial and authoritative opinion.

[December 18th.—Since the above was written, I have had in two more cases of uterine myoma evidence of considerable decrease in size, with satisfactory improvement in other respects.—G.E.]

A MONSTER FÆTUS.

By H. R. GREENE, M.D. (CAIRO).

THIS drawing accurately represents a monster born in Cairo on the 3rd of August, 1887. Dr. Freda, of the Sanitary Service, who delivered the woman, writes as follows:—

"The woman M. M——, Egyptian, aged thirty, of good

constitution, married, living in Fagallah, has had in all four confinements. The three first, in which she gave birth to two girls and a boy, presented nothing remarkable. In her fourth she brought forth a monster with two heads and



three arms. Labour lasted about two hours, the presentation being by the breech. The monster was a fully developed nine months' foetus, and was still-born. The mother is doing well."

OBSTRUCTION OF THE BOWELS.

By CHARLES BOYCE, M.D. EDIN.

THE great fatality accompanying obstruction of the bowels makes the condition assume to every practitioner great importance. The deaths set down under this heading in the Registrar General's Reports appear to be steadily increasing in number. In 1877, 1449 deaths were attributed to this cause; in 1880, 1610; and in 1885, 1919 deaths, of which 238 were produced by stricture of the intestines. Rational treatment depends on a sound pathology, and the classification suggested by Dr. Haven, in the *American Journal of Medical Sciences*, vol. lvi., is of such a simple and

complete nature as to recommend itself to clinicians. He arranged all cases under the following heads:—

1. Intermural, those implicating the intestinal walls.
2. Intramural, those caused by lodgment of foreign substances.
3. Extramural, those acting from without.

The two following cases both belong to the first division.

ANNULAR STRICTURE OF THE INTESTINE—OBSTRUCTION OF THE BOWELS FOR NINE WEEKS.

M. W—, aged fifty-four years, of lymphatic temperament, with a marked tendency to obesity, had never suffered from any serious ailment, no history of dysentery, and had never lived abroad. Mother died of cancer of liver. I was consulted on March 20th, on account of constipation which had lasted for many months; the bowels acted only at long intervals, and after taking aperients, there had been no action for four days before I saw her; she felt sick, and her abdomen was griped and distended. I administered an enema, but without much result, so I ordered an ounce of castor oil. On the following morning, as there had been no action, I again gave an enema, but again unsuccessfully; evidently there was total obstruction; no flatus had passed. I persisted in administering enemata twice daily till March 27th, when a large loose motion was passed. I now ordered cascara sagrada, with nux vomica, and the bowels acted regularly as long as I continued the former drug, but on leaving it off, great difficulty was experienced, and frequent resort had to be made to domestic remedies. This state of affairs went on till the 13th of May, when the bowels acted for the last time, after a dose of Epsom salts. Symptoms of chronic obstruction gradually supervened; the expression became anxious, the eyes sunken; the body lost fat, and became emaciated, and vomiting occurred from time to time; paroxysmal pain, with borborygmi and meteorism. The abdomen was considerably distended, with bulging at the sides; there was no tenderness except upon deep pressure in the left inguinal region, where an indistinct resistance was felt, which was assumed to be a fecal collection; vermicular action of the bowels was very apparent, especially towards the end, when the mere tap of the hand on the abdomen would cause great coils of intestine to stand up, distended with flatus, and exciting great pain. The vomiting was occasionally stercoraceous, and there was a constant feeling of sickness present, which prevented food being taken, with the exception of iced soda and milk; and indeed, even this had to be omitted owing to the pain it caused, and resort was made to nutritive enemata; whilst small quantities of champagne were allowed by the mouth. Flatus in small quantities was occasionally passed, but I may say that the nurse in constant attendance thought this was doubtful. The temperature remained normal till two days before death, when it registered 100°. The urine was secreted, but scantily, and was throughout very dark in colour. Rectal examination revealed nothing, and tubes used for giving enemata bent upon themselves or coiled up in the sigmoid flexure and rectum. Per vaginum, small indurated lumps could be felt in the anterior fornix, to a certain degree movable. The uterus was normal in length, as shown by the sound; there was no uterine discharge. She gradually sank, and died of exhaustion on July 16th, so that for sixty-three days there was no passage of feces—an unusually long period. From the 3rd to the 10th of June she was an in-patient of the West Kent Hospital.

During the progress of the case the operation of colotomy was frequently suggested to the patient, but always refused. Great relief was given on two occasions by introducing an aspirating needle into the prominent coils of intestine, and drawing off the pent-up flatus. No unfavourable result followed the procedure. At the necropsy the abdomen was greatly distended, and on opening it the large and small intestines were greatly dilated, and rolled out of the wound. On following the intestines a narrowing was found at the sigmoid flexure, which permitted only a probe to pass. The uterus was found to contain several fibromata, and these were evidently the lumps felt per vaginum. The other organs presented no appearances important to the case.

Here then we have a clinical history of considerable interest from many points of view. 1. Concerning the motions, standard authors generally draw attention to the flattened ribbon, or pipe-like appearance of the stools; but in the intermediate stage of this patient, between the two attacks of obstruction, copious-formed motions were passed; and this, as Curling, in his "Observations on Diseases of the Rectum," says, might be accounted for by the dilatation of the bowel below the stricture. Dr. Hilton Fagge, in the *Guy's Hospital Reports*, says: "I am for my part indisposed to place much reliance on the statement of a patient that the motions have for some weeks been abnormally narrow."

2. The quantity of urine, according to some writers, affords a means frequently of diagnosing the seat of the obstruction. Thus where it is low down, the quantity secreted is large; and scanty when high up; the diminished quantity in the latter case being due to persistent vomiting in part (Barlow); and in part to some reflex inhibitory influence exerted through the sympathetic nervous system upon the excreting function of the kidneys (Fagge). But here we have a stricture low down, where during the whole course of the obstruction, the quantity was greatly diminished. The same diminution I have also observed in another case of obstruction which lasted four weeks, where the cause was cancer of the upper part of the rectum.

3. The puncture of the intestines, and the withdrawal of flatus, afforded great relief on two occasions, and was not followed by any peritonitic symptoms.

4. The presence of fibromata in the uterus has an interest in connection with the diagnosis, such as the possibility of their pressure on the intestine being the cause of the obstruction.

6. This case also shows that the long rectal tube is not to be relied upon as an aid to diagnosis. Treves, in a recent lecture in the *Lancet*, says: "Enemata as a means of diagnosis are practically useless; still less useful is the long tube. This instrument is not only a delusion, but a snare, and its valuelessness as a diagnostic agent can be well demonstrated on the *post-mortem* table." In cases of fecal accumulation the long tube frequently proves of the greatest value, and is a rational remedy to adopt, but its use must be attended with certain precautions, such as having it well softened before using, introducing it slowly, dilating the bowel with the fluid at the same time, and examining the rectum with the finger from time to time to ascertain whether the tube has bent upon itself.

CANCEROUS STRICTURE OF RECTUM—OBSTRUCTION OF BOWELS FOR FOUR WEEKS.

Mrs. H—, æt. sixty-four; sister died of cancer; a delicate woman; suffered a few years ago from angina

pectoris; but her former illnesses had no connection with her present intestinal trouble, except an attack of diarrhoea which she had in July last. Bowels opened naturally for the last time on Oct. 10th. An enema was used on Oct. 17th, but could not be retained. After Oct. 24th difficulty was experienced in passing urine. Vomiting on one occasion was stercoraceous. On examination a rounded tumour was felt per vaginam and per rectum, occupying the pelvic cavity; it could not be felt above the pubes. She died on Nov. 7th. Twenty-eight days elapsed without her having passed fæces. A *post-mortem* was made a few hours after death, but permission was only given to examine the abdomen. A large schirrus mass was found in the rectum, totally obliterating its lumen, the bowel above being greatly dilated. At various points of the mesentery smaller nodules were found, one of which partially involved the small intestine.

In cases of chronic obstruction of the bowels the question of colotomy is one which must always be duly considered, holding forth as it does the prospect of prolonging life, or at least of alleviating suffering. My first case would have derived the full benefit of this conservative operation, and many years might have been added to her life had she submitted to the procedure; but in the second case we have an equally good example of our helplessness in dealing with cancerous strictures. In this particular case the small intestine must have become obstructed before long.

FROM GENERATION TO GENERATION: A PRELUDE TO THE STUDY OF HEREDITY.

By R. A. DOUGLAS LITHGOW, LL.D., M.R.C.P. ED., F.S.A.,
F.R.S.L., ETC.

(Continued from page 549, December, 1887.)

AMONGST those nervous diseases, a predisposition to which is undoubtedly inherited, I shall instance, in the first place, *hysteria*. So important is this predisposition as a cause of hysteria that it is capable of developing not only a tendency or liability to it, but also the complete evolution of the disease itself; whilst the hysteria of parents or ancestors usually predisposes to hysteria in the children—thus denoting an inheritance of like tendencies, and especially in transmission from mother to daughter. Various other nervous affections, which have appeared in the ancestors, favour a disposition to hysteria in the descendants; just as it happens, on the other hand, that hysteria appears in one generation, and epilepsy, chorea, insanity in the next. Briquet has proved that more than a fourth of the female descendants of the hysterical suffer in their turn from hysteria; and Amann has recently stated that in 208 cases of hysteria he proved with certainty a hereditary tendency 165 times—that is in seventy-six per cent. All those phenomena which indicate the possession of a neuropathic predisposition have a decided influence upon the transmission of a tendency to hysteria: moreover, privation, insufficient nourishment, debility in the parents arising from senility; or chronic diseases, as phthisis, apparently favour the development of a tendency to hysteria in the children. The inherited tendency to hysteria may for a long time remain latent, until, in fact, some constitutional shock or epoch develops an outbreak of the disease. In other cases the transmitted predisposition may be strong and effective enough to develop it independently. It should, however, be remembered that in a few cases hysteria may result in a child from the mere fact of its imitating an hysterical parent.

That weakly constitutions manifest a greater predisposition, must be conceded, just as acquired conditions of debility favour the development of the disease. Herein is probably to be found the connecting link in those cases in which debility of the parent induces hysteria in the descendants.¹

Epilepsy.—The hereditariness of a predisposition to this affection is beyond all doubt, as is acknowledged by every authority who has written upon it. The predisposition itself may be transmitted directly from parent to child, or it may remain latent in a generation or two, and appear in the grandchild or great-grandchild; moreover, it may be traceable only in the collateral branches of the ancestry, as in hereditary maladies. Predisposition may also be connected with congenital formation, as is often evidenced in cases of chronic hydrocephalus, also in those in which there is a misshapen or unsymmetrical form of the head. Amongst other predisposing causes may be mentioned the scrofulous diathesis and idiosyncrasy; also the epochs of childhood and puberty, at which periods the nervous and muscular systems attain their maximum of sensibility and irritability, and the physical susceptibility is greatest. With regard to the influence of the scrofulous diathesis, Dr. Cheyne holds that epilepsy is as certain a manifestation of the strumous disposition as tubercular consumption, or psoas abscess; but it may be observed that the strumous diathesis, and a particular conformation of the head, are both very likely to descend from parents to their children.² In those cases of epilepsy which are hereditary, the affection is usually developed at an earlier age. In the great majority of cases epilepsy is developed between ten and twenty years of age, and especially at or about the period of puberty. According to Echeverria, the occurrence of the symptoms of hereditary epilepsy is before puberty; according to Reynolds, not later than the twentieth year. It may, therefore, be assumed that an individual with a hereditary predisposition, remaining healthy up to the twentieth year, will also escape epilepsy after that, so far as its development is excited by the hereditary tendency alone. Such individuals often suffer from eclampsia as early as during the first dentition, but afterwards again remain apparently healthy up to the outbreak of the epilepsy.³ Although the father or mother of the patient may never have had an attack, either of the grand-parents, or uncles or aunts may have been subject to it. Zacutus Lusitanus mentions the case of an epileptic man who had eight children and three grand-children afflicted by the disease. Stahl and Reininger adduce instances of the whole of the members of a family being attacked by it at the period of puberty. Boerhaave remarks that, like several other hereditary maladies, it often passes over alternate generations, and he adduces an instance in which all the children of an epileptic father died of it. Dr. Copland says: "I had, in 1820, a brother and sister some time under my care, who inherited the disease from their father, and they had two other brothers and one sister also subject to it—in all five. The fits appeared in all of them about the period of puberty, and one of the brothers died about the age of forty from apoplexy, complicated with the seizure. MM. Boucher and Casauvieilh state, that in 110 patients, respecting whom they had made inquiry, 31 were hereditary cases; and M. Esquirol found, that in 321 cases of epileptic insanity, 105 were descended from either epileptic or insane parents."

¹ Jolly.—Ziemssen, vol. xiv.

² Watson.

³ Nothnagel.

Amongst those cases in which the disease is produced by factors of a kind not appreciable anatomically, which at times affect the nervous system alone, at others the whole organism, inherited predisposition or tendency occupies the first place, and is of prime importance. Seeing that all observers are agreed upon this fact, I need not further cite either statistics or instances in its defence, although in addition to those already quoted, I may be permitted to mention the experience of Echeverria, who, out of 306 patients under his own care, had observed 80 with an hereditary tendency. With regard to this hereditary tendency to epilepsy, we must be careful not to limit it too much in its signification, as, for example, in assuming that epilepsy only and strictly in the forbears is calculated as strictly to reproduce epilepsy in the children. This view cannot be upheld for a moment, as owing to those phenomena of the law of variability which I have already referred to, and which are denominated metamorphoses in transmission (by which also the differentiation of individuals is necessitated and secured) it by no means follows that the ancestral or parental form of affection is strictly inherited by, or transmitted to the children, but that whilst similar in kind, it may be very different in degree. As Professor Nothnagel, of Jena, says: "The children of those parents may become epileptic who have been mentally diseased, but who have never suffered from convulsive affections. The fact is, hereditary disposition must be taken in a far broader sense, and the proposition may be enunciated that any neurosis in the parents, whether it be of a lighter or more serious kind, may plant in the children the germ which may develop into epilepsy. This obtains not only in regard to hysteria, hypochondria, and catalepsy, but I have observed cases where—e.g., the mother suffered for many years from pronounced migraine, and with this exception there was absolutely nothing else in the way of family tendency to be found, and yet a daughter was hysterical, and a son epileptic. From my experience, I am even inclined to ascribe to neuralgia of many years' standing in the parents, a capacity of producing epilepsy in the children. There are even not wanting instances where, in connection with a mere 'nervousness' of the ancestors, epilepsy made its appearance in the descendants."

I have already stated that in hereditary epilepsy the first occurrence of its symptoms is, according to Reynolds, not later than the twentieth year; and to this I may now add that an individual who has inherited a predisposition to epilepsy may escape its development altogether if his general health remains satisfactory up to this period. This latter statement depends, of course, upon the assumption that the attack is produced entirely as the result of the inherited predisposition, and does not affect the occurrence of epileptic seizures from other causes. Although epilepsy may be caused by many factors, such as alcoholic and sexual excesses, prolonged mental strain, disturbances of nutrition, as produced by defective nourishment, etc.; external injuries, etc., yet none of these are so effective in exciting "the central epileptic change" as hereditary predisposition. Why this inherited tendency should be so much more active during youth—from the seventh to the seventeenth year—we really cannot satisfactorily explain, notwithstanding the many theories which have been propounded to account for it: we can only at present accept the fact, and trust that time may throw some further light upon this interesting question in the future. With regard to prognosis, Reynolds maintains that those cases are least amenable to treatment in

which the source of the disease is involved in the greatest obscurity.

Chorea.—As in hysteria, epilepsy, etc., there is a marked hereditary predisposition to chorea—i.e., "an hereditary transmission of a special susceptibility to irritation—an impressionability of the nervous system"—generally associated with constitutional debility. Thus, as quoted by Von Ziemssen:—Dr. Huntington, of Long Island, with his father and grandfather (also physicians) says he has observed entire families of choreic persons, in which the disease was propagated until once a generation had been overleapt, when the hereditary disposition in that family ceased. In these cases the chorea began between the twentieth and fortieth year of life; attacked men and women alike, and usually led to mental disease, often associated with suicidal tendencies, and finally to death. That chorea may be congenital—i.e., transmitted hereditarily, admits of no doubt, although the occasions of such actual transmission may be regarded as comparatively rare. Fox has recorded a case in which the child, a male, was born six weeks before the period, and from the first hours of his life he suffered from violent choreic movements, which gradually developed into epilepsy in his third year; after which he had no further attacks, but his speaking and walking were defective up to his thirteenth year. Richter also mentions chorea as occurring congenitally in the case of two girls whose mothers had been frightened when far advanced in pregnancy. From their birth the children suffered with chronic spasms, which ceased during sleep, and eventually disappeared almost entirely.

That chorea is often mimetically contagious, is also a well-established fact: thus Leube saw two girls, of the ages of sixteen and seventeen, hysterically predisposed, who acquired chorea in consequence of intercourse with another girl, aged twelve, who had the disease. Bricheteau also mentions the following interesting case:—A girl was admitted into a ward in the Hôpital Necker where there were girls who were hysterical, and who had formerly been the subjects of chorea, and within six days eight other patients in the same ward were taken with chorea. The further spread of the disease was arrested by isolating the chorea patients. The intensity of the symptoms varied greatly; some of the attacks lasted for months. In connection with such contagious or imitative cases, the especial point to remember is that a *distinct predisposition* seems to be necessary to propagate the disease by imitation: otherwise the number of instances would be much greater than it is.¹

In this connection I may now briefly refer to *alcoholism*; the pernicious effects of alcoholic excesses on the nervous system being well known, and these are, according to all competent observers, markedly hereditary in many cases. In cases of inherited predisposition to chronic habitual drinking, it is not absolutely necessary that the parents or ancestors should have been drunkards, but that the family is characterised by that form of unstable nervous organisation which I have already alluded to as a neuropathic predisposition, and that the neurotic taint which manifests itself in other members in such affections as hysteria, epilepsy, and insanity, will be manifested in these cases by an intense, if not insuperable, craving for alcohol. At the same time it should be borne in mind that owing to the tendency which acquired predispositions have to reproduce themselves in the offspring, drunken parents may actually transmit this predisposition to their children, or if not, then

¹ Von Ziemssen.

such a state of disordered cerebral nutrition as may express itself in epilepsy, insanity, idiocy, hysteria, weakened will-power, or mental instability. Here again we see how the differentiation of individuals is maintained by pathological processes; for, given a drunken parent or parents, their children will assuredly inherit such a neuropathic disposition, as in the case of one of them may manifest itself in idiocy, in another as epilepsy or hysteria, in another in weakness of will, and in yet another or others in uncontrollable alcoholic craving; some may escape in their own persons, but only to hand down the heritage of their parents' shame to others and succeeding generations. Dr. Richardson has well said:—"The solemnest fact of all bearing upon the physical deteriorations, and upon the mental aberrations produced by alcohol, is that the mischief inflicted by it on man through his own act and deed cannot fail to be transmitted to those who descend from him, and who are thus irresponsibly afflicted. Amongst the many inscrutable designs of nature, none is more manifest than this, that physical vice, like physical feature and physical virtue, descends in line. But not one of the transmitted wrongs, physical or mental, is more certainly passed on to those yet unborn than the wrongs which are inflicted by alcohol. Many specific diseases engendered by it in the parent are too often stamped in the child; while the propensity to its use descends also, making the evil interest compound in its terrible totality." It is unnecessary for me to dilate upon the many acute and chronic diseases caused directly and indirectly by alcohol; but the point on which I would especially insist is that the protean pernicious effects of alcohol taken in excess do not, unfortunately, end with the miserable life of the poor drunkard, but are passed on to his irresponsible children as a legacy from violated nature—an indelible brand, an inherited curse—which may express itself in a distinct neuropathic predisposition capable of developing insanity, hysteria, epilepsy, impaired volition or mental instability, and of reproducing the primary vice in which it has originated. Of the real nature of this predisposition we know nothing, beyond the probability that the nervous centres are somehow implicated in its production, but we must for the present be content to accept facts as we find them, and trust that future researches may be able to throw light upon a subject which is now obscure and mysterious.

Having now considered the hereditary element in insanity, hysteria and its allies, epilepsy, chorea, and alcoholism, I might readily refer also in detail to neuralgia, cephalgia, migraine, tubercular meningitis, sanguineous apoplexy, locomotor ataxy, progressive muscular atrophy (Cruveilhiers' paralysis), pseudo-hypertrophic muscular paralysis (Duchenne's paralysis), sclerosis, and other nervous diseases which are alike subject to heredity, but I think I have adduced sufficient evidence to support the principle for which I am contending—viz., that whether the nervous system contains the *fons et origo* of heredity or not, its diseases are markedly hereditary; furthermore that the pathological differentiation of individuals is manifested to an extraordinary degree by the transmission of nervous diseases, for, given a neuropathic predisposition in the parents, it is found capable of developing a tendency in the offspring not only to itself but also to hysteria, epilepsy, chorea, insanity, neuralgia, and in fact to ring the changes on every known variety of nervous disorder or disease. Thus we see in every family, the members of which have inherited a neuropathic predisposition, that it may not only develop into various forms of

nervous disease, but that each member has inherited *something* which the others have not, whilst some may only act as mediums for transmitting the predisposition to a future generation, and at the same time they themselves may show no evidence of its possession. The differentiation of individuals is absolutely necessitated physiologically and psychologically by the interaction of heredity with the law of variability, and so it must be pathologically for the reason I have elsewhere stated—viz., all morbid action is but a modification or perversion of some natural or normal action or function; and all the physical results constituting morbid structural alterations are mere perversions or modifications of natural or normal textures, or, at most, analogous textures fabricated from the same materials by like processes. Every living individual, therefore, differing as he does from every other physiologically and psychologically, must also differ from every other in his pathological tendencies; and I believe that ignorance of this fact is the most fruitful source of false views both in pathology and practice. As too much stress cannot be put upon my argument in this direction, I once more briefly summarise it here. By the law of heredity, all living beings tend to reproduce themselves in their offspring physically, mentally, and morbidly; but owing to the law of variability which interacts with that of heredity in the case of every individual, the likeness is never perfect—the ideal law of heredity that like produces like is never attainable. We see this even in the case of twins, whose resemblance to each other, however striking, is still far from perfect. However much a child may resemble its parents—or one child another—essential differences will be found externally and internally, physically and mentally, and with regard to their pathological tendencies. As in health so also in disease: Nature preserves the type by varying the individual; and as in health so also in disease, the individuality of every living man is necessitated and maintained by the law of variability. The phenomena of variability in health are seen in the physical and mental differentiation of every individual from every other, however closely allied; the phenomena of variability in disease are seen in the differences of individual constitutions, as to their mode of manifesting the effect of the same morbid cause, and their relative power to sustain it, and in the metamorphoses or transformation in transmission, to which I have recently alluded. The great principle for which I am contending is the due recognition of individuality in every case presented to us, remembering always that physical and mental differentiation necessitates the differentiation of pathological processes; and that co-operating with the great law of heredity which tends to produce like from like is the equally potent, if subservient, law of variability, which necessitates our differentiation from each other physiologically, psychologically, and pathologically, and by means of which our individuality is developed and maintained.

(To be continued.)

Special Articles.

CONSULTANT TYPES—GOOD AND BAD.

By "ARMIGER."

(Continued from page 554, December, 1887.)

TAKEN altogether, my experience has shown a marked difference in the comparative type of town and country consultant. In the latter case the position has been too often the result of mere chance, of accident, perhaps of

the desire to be the medical magnate of the district, a desire favoured by circumstances, and less the result of any real ability, for the general type not to be affected. In the case of any man who proposes to be a consultant in London, or any large city, the mere facts of wealth, connections, or influence, will not avail much; there must be genuine ability, actual superior knowledge and experience, or opportunity for experience. Moreover, his ability must be recognized by his professional brethren. In the country this is different; a man may be the leading consultant, hold the best position and have the best patients, and yet be devoid almost entirely of ability. Time is changing this to a great extent, but it is sufficiently the case to be looked upon as the rule. But where the difference is most marked is in the display of amenities. So far as my observation has gone, the country consultant compares unfavourably with his town *confrère* on the points of courtesy and fair dealing. Not but what there are many of the worst type to be found among town consultants, men who, if they get a chance, will entice the patient away altogether. They abound, unfortunately. Nothing is more common, when a person living in the country goes up to town, than to consult some of the town men, especially if there is any pet ailment, real or fancied, without informing the usual medical attendant. This has happened to me many a time, and I have been surprised at the courteous intimation of the fact I have received subsequently. Under the circumstances this was quite uncalled for, no rule of professional etiquette having been infringed, and any notification of the fact to the usual attendant a purely voluntary matter. Yet scores of times I have had letters from London men to say that they had been consulted by some of my patients. While, of course, such an action might be pronounced as only good policy, still one cannot help feeling that it is both honourable and gentlemanly.

As a rule I have found the greater the man the greater the courtesy. Sometimes, however, it has been the other way. Not long ago a patient went to London by my advice for treatment, circumstances at his home being unfavourable. The case was not by any means of an obscure or doubtful character; yet the physician under whose care he went as a paying hospital patient traversed most pointedly all my decisions and diagnosis in his statements to relatives, and would not even write to me until openly taxed with duplicity, when he made a lame attempt to disclaim any doubt as to the correctness of my diagnosis. The object in this case was to persuade this patient to enter his "*private hospital*." Dr. F— was of this type—undoubtedly a good man professionally; but with a very marked moral obliquity. He had one of these private hospitals (nothing more, really, than a good lodging-house), and whenever he had a patient from the country, he left no stone unturned to get them to enter his hospital. It paid him well. An enhanced fee for any operation, heavy charges for boarding, nursing, and attendance, and for his visits, made every patient valuable to him. The lodging-house keeper, called the lady superintendent, was merely a salaried servant, and the nurses and ordinary attendants were the same. All the boarding was superintended and purveyed by himself; in fact, he was the real lodging-house keeper, and pocketed all the profits. Professional dignity had no real meaning for such a man. There are, unfortunately, many men of such a type in London, and one or two of our large towns, who carry on this sort of traffic. It cannot surely be difficult to see how such a state

of things may warp a man's ideas. One effect produced is the marked tendency to look for any approach to their own particular speciality. If it is found to be present at all, or any excuse for saying it is present can be made, the patient is by hook or by crook persuaded to enter the *hospital*; and as there is little or nothing to cure, the patient is discharged as a brilliant case. There is, unfortunately, too much reason to believe that in many cases patients have been told that certain diseases were present which had no existence. Weak-minded, susceptible people have been easily persuaded that they had certain special affections requiring special treatment. One case only may be mentioned, where a lady suffering from emphysema was induced to submit to a course of *private hospital* treatment for uterine mischief which never had any existence. This wilful deception of patients recalls to my recollection two gentlemen practising as surgeons. The first was remarkable from great affectation in style of dress. Allowing his hair to grow long, with a bushy beard, dressing always in black, shewing an immense expanse of shirt front with prominent jewelled studs, he certainly cut a figure, which did not appeal to good taste. Loud in speech, strongly self-asserting in manner, possessed of great shrewdness and undoubtedly great professional knowledge and skill, he acquired an extraordinary ascendancy over patients. He did this by lecturing them; no matter what ailment presented itself, it was enlarged upon. Every professional term which could be brought to bear was introduced, and generally he succeeded in overwhelming the patient with such a periphrastic torrent that they were convinced he was the most erudite and able man of the day. He simply bamboozled his patients, prostituting great ability and operative skill to the most patent charlatanism. By pronouncing many benign tumours and simple ulcers as malignant, he claimed credit for having cured cancers without number. Bladder affections all with him depended on the presence of a stone, and proceeding to cure the simple ailments, he claimed to have removed the stone without operation. Ordinary uterine affections were all due to misplacement, and introducing a pessary for a time, while the simple ailment was treated, claimed credit for having cured the graver affection. A good example of his style of working is furnished by the cure of a hysterical woman, who suffered from the ordinary "*globus*." He at once assured the patient that the case was most serious, and that she had *only come to him in time*. Examining the throat in a fussy way, and introducing his finger, he asked if she was in the habit of carrying articles in her mouth. The reply was, "No." "Don't you sometimes put pins in your mouth?" "Well, I might do so." "That's it, I feel sure of it; you've swallowed one—I can feel it. I thought it must be something metallic; if it be not removed it will cause your death ultimately." He examines again. "Ah! now I can feel it distinctly; it lies below the cricoid cartilage, and is involved in the aryteno epiglottidean fold; the point is directed towards the superior anterior angle of the sub-tracheal tissue, and the head is pressing on the lateral branch of the recurrent nerve. Now, keep quiet just a moment, and try to bear what I am about to do. I will be as gentle as possible." He then introduced a pair of throat forceps, and rummaging about in the larynx for a few seconds, withdrew the forceps, holding a pin which he had conveyed between the blades by sleight of hand. This astonished the patient, whom he informed that the damage done was very great, and that it would give

rise to symptoms for some time. He thus prepared the way for recurrence of the "globus" sensation and a long course of subsequent treatment.

This woman had unbounded faith in this individual, and submitted to all his exactions with readiness for a time. He acquired a wide reputation, and actually worked into a good consulting practice, to the chagrin and dislike of his professional brethren, who could not refuse to meet him, although they unavailingly denounced him as a quack. It must be said that he never acted badly towards his medical *confrères*, but was usually fair and conciliatory, although he could not help indulging in rhodomontade.

Mr. H—, the second example of this bombastic type, was a man of inferior social extraction, and having been unable from this cause to obtain a good education in early life, when circumstances improved and enabled him to avail himself of every opportunity of obtaining it, failed somehow to acquire that outward indication of being a well-educated man which is usually seen. Perhaps his early life and social surroundings may have acted to prevent this, but certain it is that in almost everything the impression conveyed was want of refinement. Choosing the medical profession, possessed of marked intelligence and great zeal (he was of Jewish origin), he also possessed unbounded ambition. He passed well, obtained good appointments, and after a term as house-surgeon to a leading provincial hospital, settled in the same city. Combining shrewdness with unscrupulosity and good professional knowledge, he continued by a system of sheer humbug to obtain a wide practice. Pursuing exactly the same tactics as Mr. G—, he obtained the unbounded confidence of a certain sort of people. Unfortunately, his want of refinement and *savoir faire* led him to be aggressive, and in many instances unprofessional in conduct. In consultation he was overbearing, and would by some means or other convey to the patient and friends the knowledge that he differed with the usual medical attendant. This has had its inevitable effect, as no man who aims at a consultant's practice can afford to make himself unpopular and feared or disliked by his professional brethren. I learnt a short time ago that the prosperity had not continued, and that a declining *clientele* has been experienced.

THE MEDICAL MAN OF THE FUTURE.

BY ALFRED H. CRESPI, WIMBORNE,

LATE EDITOR OF THE "SANITARY REVIEW."

THE recent election to an Assistant-Physicianship, at Guy's Hospital' of Dr. E. C. Perry (late Captain of Éton, Fellow of King's College, Cambridge, and Senior Classic in 1880), following by a short interval that of Dr. Donald Macalister (Senior Wrangler and First Smith's Prizeman in 1877, and Fellow of St. John's College) to a Physicianship at Addenbrooke's Hospital, Cambridge, furnishes matter for serious reflection. No one acquainted with medical questions can be ignorant that Cambridge is now pouring into the medical profession nearly fifty medical graduates a year, many of them first-class men; while Oxford, which has just resuscitated her ancient medical school, is sending in a smaller, but I believe an increasing stream of highly-trained graduates. Trinity College, Dublin, long a brilliant medical school, is also adding largely to the supply of well-trained practitioners; while the remaining British Universities are literally pouring in their large contributions, and engaged in the same work is

the College of Surgeons of England, which adds a contingent of, it may be, thirty or more Fellows by examination every year. This is going on simultaneously with the enormous strides taking place in the education of the Licentiates of the Royal Colleges of London, and the greater stringency of the examinations at all, even the humblest and remotest training body. Dr. Banks, the President of the British Medical Association, stated in Dublin recently that the medical profession had sometimes been disparaged because so few comparatively of its members were graduates in Arts, and so were at a distinct disadvantage in comparison with the sister professions of the Church and the Law, in which, he added, a degree in Arts was the rule. Although Dr. Banks informs me he meant his remarks to apply to Ireland, it will be news to most people that solicitors are commonly graduates in Arts. Indeed, it might be maintained that M.A.'s are as scarce among them as Wranglers and Classics in the medical profession; and it will, no doubt, reassure the public that the complaints as to the inferior quality of a moiety of the candidates for Holy Orders are, on the authority of the Physician to the Queen in Ireland, ill-founded. Even at the Bar, however, the proportion of non-University men is large, and the army almost necessarily receives a very meagre sprinkling of graduates. The fact remains that the portals of the medical profession are being guarded almost more jealously than those of any other profession. The clever chemist cannot find admission to it by passing a simple examination. No surgeon's assistant can, after four or five years' routine discharge of his duties, get a diploma by the grace of any medical corporation. No medical bishop can confer admission on any *protégé*. In short, nothing remotely resembling a typical theological college, with its two years' course and three or four tutors, exists in medicine; nothing like the slipshod work of a country attorney's articulated pupil; nothing like the examination required of militia lieutenants seeking to join the regular army, or the lenient examinations of certain of the Bishops—the more lenient the more inferior the quality of the candidate, and the fewer his educational advantages—remains in the medical profession. After passing a more or less severe examination, or taking a degree in Arts, every medical student has four, five, or even six years' careful and systematic training in a well-appointed medical school, and every few months his career is marked by a searching examination lasting several days, and at which half the candidates—sometimes far more, seldom fewer—are stopped and referred to their studies, and often the curriculum is materially lengthened in consequence. In another ten or fifteen years it may be, that should the present progress continue, a quarter or a third of the medical practitioners of the United Kingdom will be graduates in Arts, and from two-thirds to three-quarters will hold University degrees in Medicine.

All this is as it should be. But it must not be forgotten that with inferior men getting rarer every year the mere possession of an ordinary M.B., B.A., will not obtain for the holder a position on the medical honorary staff of a large hospital; and the M.R.C.S. has long ceased to be any passport to the surgical side. On the staff of one of our provincial schools there were, fifteen years ago, only four members of our ancient universities; there are now sixteen, some of them first-class honourmen. It may be that the days are nearly come when there will be a repetition of the state of things which Bacon described when he said that the lawyers had the most money, the clergy

the highest honour, but the physicians the greatest learning. The time may soon return when the London and Dublin Colleges of Physicians will again demand a degree in Arts from Oxford, Cambridge, or Dublin, of all candidates for their Fellowship. Anything that tends to fill the country with well-read, highly-trained practitioners is to be commended. Unfortunately there is another side to the picture, and to this I propose directing attention. No profession is so exposed to the depredations and encroachments of unqualified pretenders, and the chemists and the quacks, though I do not mean to put the two together, will hardly fail to profit largely by the present state of affairs. Again, the multiplication and ever-growing abuse of hospitals and dispensaries are curtailing the slender incomes of medical practitioners. Perhaps the only possible occasion on which small shop-keepers and skilled mechanics can consult Fellows of Trinity College, Cambridge, Fellows of the Royal Society, Senior Wranglers and Senior Classics is in a hospital, and they are not slow to use the chance. Nor must the rapidly-diminishing death-rate and the decreasing sick-list be omitted as most important factors in cutting down the demand for medical services, and that, too, even to a greater degree than the increase of population provides more patients. The sale of patent medicines is also becoming larger and reaching farther, while the frequency with which well-to-do people cut out and use prescriptions from the *Family Doctor*, and other similar publications, can only be duly appreciated by the medical man who finds that his friends and neighbours dispense with his services as much as possible, and often contrive, and not unskilfully either, to treat even serious complaints. The work of sanitary associations and of the St. John Ambulance Association all tends in the same direction—teaching people how to do without the doctor except in cases of urgency. A thousand well-educated medical men set up every year in the United Kingdom. The facilities for turning out a large body of very superior practitioners are being greatly developed everywhere, and though the percentage of great intellects may not be larger than formerly, far more is made of the rank and file than was possible or indeed attempted twenty years ago.

Medicine is not a popular calling with the rich and great, and it has peculiar disadvantages. The young doctor, settling in a fresh place, too often finds himself less respected than he deserves. He has none of the leisure of the retired officer; none of the opportunities for social intercourse, dinner parties, and out-door games of the clergy. As for long holidays entailing absence from home of six months, nine months, fourteen months, and so forth, as are not absolutely unknown on some pretext or another among the well-to-do local rectors, he cannot indulge in them. He must be prepared to find that some inferior theological student, admitted to Holy Orders by the too-lenient grace of an over-kind bishop, will possibly be thought a better scholar than himself, though he may have taken a good degree in Arts and passed six years in medical studies. But there are even worse drawbacks. The practice of medicine is exhausting, responsible, and arduous to a degree. With the rapidly-increasing numbers of Old University men a large percentage of young doctors have to begin as assistants, while they look around for openings, or in country places as club and parish doctors. Can contrast be more painful than between the refectories of Christ Church and Trinity, with their graceful and refined tone of thought and their animated conversation, and the lonely surgery of a country parish doctor, where he is to be found

three times a day (Sundays not always excepted), handing pieces of plaster or boxes of pills to ignorant peasants or stolid colliery labourers?

What other profession can present such a discipline of self-sacrifice as is the lot of the man whose thoughts are filled with the subtle reasonings of Kant and Spinoza, the speculations of Max Müller, and the sweet periods of Spenser, before whom float visions of the gorgeous colouring of Raphael, Francia, and Michael Angelo, who can in a waking dream feast his eyes on the splendid canvases of Dante Gabriele Rossetti, and Burne Jones, who finds delight in the masterpieces of ancient sculpture and mediæval architecture, and then has to come down, for it is a sad crushing coming down, to the level of a Cardiff dock-yard labourer, or to ministering to the imaginary ailments of a Birmingham tradesman's wife. Sometimes the crushing labours of the highly cultured and learned medical man seem sadly misplaced, and it might look as if far inferior men, men whose training had been rigidly confined to the subjects barely sufficient to force an entrance through the jealous portals of the College of Surgeons, would be quite good enough for the work to be done; and yet it may be that the isolation of the country doctor's life, the disintegration of professional jealousies and competition, hardly dreamt of in the Church and other more favoured callings, and which make firm friendships among local practitioners rare and precarious, render it all the more important that he should be a man of the highest culture and acquirements, not because of its earthly rewards and recognitions, not because he is necessarily enabled to do more good to his suffering and little-appreciating neighbours, but because it unites him to the good and great of other lands and times. The unutterable weariness and monotony of a country doctor's life would at times be too crushing to be endured could he not turn to other topics and other thoughts. The great thoughts of the past, the glorious achievements of art and science, the measureless promises of the future he can grasp and rejoice in, and though necessarily lonely and with fewer opportunities than most of his neighbours of having social intercourse and foreign travel, he can pass his life contentedly if not happily, respected if not highly honoured.

The world is moving, and the outlines of physiology are becoming in many cases a part of the education of most people; at any rate, there is not that dislike of quasi-medical topics that obtained thirty, or even twenty years ago, so that a doctor who is only a doctor, however well-trained, is more likely to be appreciated for his attainments. At the same time, so removed are medical studies from the path in life of most educated people, that perhaps no other body of professional men would gain so much by culture, a wide range of general reading, and some proficiency in studies of common interest. The world can more easily judge of mathematics, classics, modern languages, letters, and popular science, than of mere skill as a physician and surgeon. Would that I could truthfully add that Medicine offered at least one reward, an assured and modest competence. That, alas, is not so. Squeezing shillings and half-crowns out of poor peasants, and receiving the bitterly-begrudged and hard-earned pittance of the colliery club or parish appointment are not calculated to improve one's self-respect, and yet they sum up the life of too many doctors, and of some, too, who have had a public school and real University training—meagre pittances that a small tradesman would despise, salaries only equal to those of a second-rate mechanic, incomes that in too many cases fall

far short of the earnings which the doctor is commonly supposed to get, and not more than sufficient to meet half or a third of his current expenses. Medicine is rarely a calling in which a poor man can prosper, and not often one to attract the rich man of good birth; and yet, in spite of all this, it is not to be regretted that year by year a higher and more perfectly educated class is taking to practise, and that ten years hence most large villages may have among their local doctors—men equally at home in the past and the present, men whose knowledge of Dante and Shakespeare, whose familiarity with the higher mathematics and the most recent speculations of science, and whose proficiency in their own calling will make them worthy to be members of that ancient and glorious profession on which Wren and Locke, Acland and Rolleston, Paget, Jenner, and Oliver Wendell Holmes, and last, but not least, Livingstone and Carpenter have shed imperishable lustre.

VICTORIA INFIRMARY OF GLASGOW.

BY ALEX. W. WALLACE, M.D.

SCOTCHMEN call an endowed school for the free education of boys or girls a *hospital*, and a house for the sick an *infirmary*, at least, so it was before railways and telegraphs. Farther, having found out that these prisons for the young were more of a curse than a blessing, they employed a large amount of the funds of George Heriot's Hospital in founding day schools, and pulled down Watson's Hospital altogether, building the Royal Edinburgh Infirmary on the site. They have so far conformed to southern nomenclature as to have "hospitals" for sick children in both the capitals; but *infirmary* still holds its ground as the designation for hospital for adults.

The Victoria Infirmary of Glasgow is, however, as yet only a potentiality. It exists in the mind of the architect; it exists also, potentially, in certain sums, in some part in one of the city banks, but in considerably greater part in the pockets of the good people of Glasgow. It exists, too, in the necessities of many hundreds of sick people in the back streets and lanes of that great city.

Glasgow may be considered as the biggest workshop in the world. One hundred years ago its population was about sixty thousand; now, including its suburbs, it reaches about three quarters of a million. The reason of this rapid growth is that it has combined the industries of three great English cities. It has the coal and iron of Birmingham, the cotton of Manchester, and the seaport advantages of Liverpool. One hundred years ago the Royal Infirmary was founded. As the city grew the Infirmary grew also, till it had reached 500 beds. Fourteen years ago the Western Infirmary was built in order to provide clinical teaching in connection with the University Medical School, which had been removed to the West End: it provides about 400 beds. The two great Infirmaries, together with some other small hospitals, only provide a bed for about every 700 of the population. It is a result of the great amount of manufacture going on in Glasgow that considerably more than half the families it contains occupy but one or two rooms each. In fact, 420,000 people are housed in 88,000 one- or two-roomed dwellings—the single rooms composing little less than half the entire number. It will be at once seen how inadequate the hospital accommodation is for such a population, even if they could call all the 1,000 beds their own. As a result

of this the existing hospitals have to refuse necessitous cases in great numbers, except at the very healthiest period of the year. It is almost ten years since Dr. Eben Duncan brought before the Southern Medical Society of Glasgow the need that existed for a new hospital for that portion of the city which lies to the south of the Clyde, and which contains a population of about 240,000, chiefly artisans and working-men. The story of the ensuing "ten years' conflict" with its difficulties and discouragements is exceedingly interesting, but we have not space to give it here. Suffice it to say that the promoters of the hospital are within sight of an Act of Incorporation; have secured a splendid site on a rising ground, where the Infirmary never can be built in, and that in spring they expect to "arise and build."

The Infirmary is to be on the pavilion principle. At present only half the building for the administrative department and one pavilion are to be erected. There will be accommodation for about sixty free patients in the pavilion, and about a dozen paying patients in temporary wards in the unused part of the administrative buildings. The undertaking seems to us to be of great promise. It has originated in the Southern Medical Society, and as it has thus received the hearty interest and co-operation of the medical men of the district, we expect that many mistakes which have occurred in connection with other hospitals will be avoided here. We sincerely hope that the "subscribers' lines," which are in use at the other Glasgow hospitals, will have no place in the Victoria. The "selection of the fittest" ought to be the object kept in view, and this can best be attained through the medical men practising in the district, aided by the missionaries, district visitors, and other benevolent agencies at work among the people.

We believe that the working classes could do far more in providing for their hospital and dispensary relief than is commonly imagined. The South Side of Glasgow is far behind the West End in the possession of wealthy residents, yet we find that the congregations belonging to two undendowed denominations on the South Side raise about forty-five thousand pounds a year for religious and benevolent purposes. This is effected by a very complete organization of voluntary collectors. The Infirmary directors ought to originate a similar organization throughout all the workshops, making a collection monthly or quarterly, and if the work is properly gone about the revenue of the Infirmary will be just as secure as if paid out of the Consolidated Fund. If this is done there will be three hospitals in Glasgow whose financial condition will make the mouths of treasurers of London hospitals to water. The "Royal" has been able during the century of its existence to accumulate a capital of some £115,000; and the "Western," during the brief period of its existence, has been able to save £48,000. There is just one hint we would like to give the directors: they are canny Scotchmen and will know how to use it. Stimulants form a very heavy item in the expense of many hospitals, yet there is no evidence that the patients are anything the better for them in such large quantities. It is just the whim of some physicians; but if you let in a stimulating doctor you cannot interfere with him, so *don't let him in*.

MONTHLY REPORT ON NEW PREPARATIONS, FOODS, DRUGS, INVENTIONS, ETC.

Carnrick's Soluble Food (Milk Wheat Food).—Doubtless the idea that because flesh is the food that is

nearest in structure to the flesh of the human body, therefore it must be the most easily assimilated, has had a powerful influence in giving rise to the belief that flesh meat is the most nourishing and sustaining food which can be used; very widespread is this belief, both inside and outside the profession, yet what foundation has it, either in observation, experience, or common sense? Our bodies are not built up of nutriment as a wall is built of bricks. So far is this from being the case, that even the fat of the food is often deeply altered in its chemical constitution before forming part of the body.¹ Much more is this true of muscle. There is no more sense in giving flesh meat by preference to an emaciated man than there would be in feeding a chlorotic girl on blood puddings. Observation teaches us that as a rule flesh meat by no means readily yields itself either to primary or secondary digestion. A weak stomach rebels against the full meal of butcher's meat, and the damaged liver is not behind in its protest, and converts the meat peptone into uric acid. Yet in spite of these warnings, medical men have been trying to make flesh more digestible by some mechanical or chemical process. Beef tea and chicken broth were the earliest inventions. Very digestible they were found to be, for the very good reason that they contained almost nothing to digest. Next to them are the pounded up beef teas, in which by dint of pounding and stewing, the muscle has been reduced to an impalpable powder, and is diffused through the fluid. Doubtless a large amount of solid proteine matter finds its way into the stomach, but in how far the individual particles retain their solubility in the gastric juice does not appear. As far as we recollect, Sir W. Roberts made no experiments on the solubility of beef tea grounds by pepsine. The latest improvement has been pre-digesting the meat with a digestive ferment. This is no doubt the only scientific method of procedure, but the resulting product is anything but palatable, and is nowise fitted by the process it has gone through for assimilation by the liver. In our opinion peptonised meat should be kept for rectal alimentation. It is now a good many years since milk began to make its way as a food for the sick, and those suffering from imperfect digestion. It stands to reason that a substance which is specially prepared for assimilation by the stomach, should be digested more easily than anything else—and such has proved to be the case. But there are cases in which the curd which is formed when it passes into the stomach is incapable of digestion. This occurs both in infants, invalids, and aged people. The Maltine Manufacturing Company have submitted to us a preparation which overcomes this difficulty. In it milk is peptonised, and is mixed with malted wheat in such proportion as to imitate very exactly the proportions of casein, sugar, and fat in human milk. The mixture is dried, and is reduced to a fine powder. It is only necessary to mix it with water, and boil it for a short time, to have a most digestible liquid food, suitable either for infants or invalids. The casein having been acted on by a digestive ferment does not form curd in the stomach. We have tried it, and in point of taste it is the only unobjectionable form of peptonised food we have met with. We are perhaps fastidious, but we never could get through a basin of milk peptonised in the usual way; it was decidedly—well, not nice. Of the digestibility of the Maltine Company's soluble milk food there can be no question.

¹ *Foster's Physiology*, 4th ed., p. 428.

Houdé's Pastils of the chlorhydrate of cocaine have been some time in the hands of the profession, and they have been freely used and tested by some of the best specialists and general practitioners. Experience has pronounced in their favour, especially in affections of the larynx and air passages. The advantages they possess are manifold. They are manufactured with care as to dosage, each pastil contains two milligrammes of the chlorhydrate, so that they can be given regularly without fear of ill effects. Most important of all, the agent is chemically pure. Another feature they possess; they dissolve rapidly and regularly, and their flavour is agreeable; patients take them with pleasure. But not alone in affections of the throat are they to be recommended. In affections of the nervous system, depending or aggravated by derangements of the gastric nervous membrane, in *mal de mer*, gastralgia they will also be found of signal service. The anæsthetic action of the cocaine can be readily ascertained by personal trial. Dr. Bridger, B.Sc., Paris, writes:—"I have tested the pastils on myself, and find they possess a very marked anæsthetic effect on the tongue, mouth, and throat; they ought to prove of use in the class of cases for which they are recommended.

Reviews.

The Artificial Cultivation of Vaccine Lymph. By JOHN DOUGALL, M.D., F.F.P.S.G. Glasgow: Alex. Macdougall, 1886.

Vaccinia and Variola: a Study of their Life History. By JOHN B. BUIST, M.D., F.R.S.E. London: J. & A. Churchill, 1887.

THESE essays show what has been as yet done in the direction of the cultivation of the specific contagium of variola. Since the discovery of the bacilli of anthrax, and the various other now well-known pathogenic bacteria associated with the infective diseases, pathologists have been actively at work in the attempt to obtain pure cultivations of the organisms associated with those different exanthematous diseases which manifestly depend upon the presence of a contagium vivum. Pure cultivations in liquid and solid media, as employed by Pasteur and Koch, have enabled us to isolate some germs as, for instance, that of tubercle; but as regards variola the practice of inoculation from animal to animal has been an unscientific and the only method of cultivation, the animal itself being the cultivating apparatus. An attempt is made in these books to determine the bacteria form in which the contagia of vaccinia and variola exist in the materials which are capable of reproducing those diseases by inoculation; and further "to discover a method by which the vaccine contagium may be cultivated apart from the animal body in some medium or media not otherwise zymotic, the method to be such that the contagium may by means of it be multiplied to an indefinite extent in successive generations, and that the product after any number of such generations shall prove itself of identical potency with standard vaccine lymph." Dr. Dougall, in concluding his essay, sent for competition to the Grocers' Company, admits that his results do not fulfil the terms of success in solving the above problem. He has failed to cultivate vaccine lymph in artificial soils, and he infers that this failure arises, not from imperfect sterilisation, bad seed,

improper modes of sowing, too high or too low temperature during incubation, wrong methods of incubation, too long or too short periods of incubation, but from some defect in the soil; in short, from the want of some peculiar zymotic pabulum or constituent absolutely essential for its reproduction.

Dr. Buist concludes his summary of results as follows:—
 “Standard vaccine lymph, carefully propagated as at present, is therefore, in my opinion, the best and most convenient material that can be obtained for vaccination. My observations appear to show that when it is taken from a typical Jennerian vesicle, it is a material *in the contagion of which no second principle can possibly reside.*” These essays throw much light upon the conditions of life of the micrococci and diplococci found in and cultivated from vaccine lymph, and it is to be hoped that the authors will not be discouraged by the fact that they have not as yet entirely succeeded in one of the principal objects of the investigation.

R. SHINGLETON SMITH, M.D.

Manual of Hypodermic Medication. By Drs. BOURNEVILLE and BRICON. Translated from the second edition, with additions, by ANDREW S. CURRIE, M.D. Edin. London: H. K. Lewis. 1887.

THIS volume, in its original form, has achieved such notable success on the Continent, that we can only cordially welcome an English edition of a work which has given a great impulse to hypodermic medication, and has done much to advance the science of therapeutics. Three hundred pages on this subject would appear to be more than the method demands, inasmuch as few drugs are commonly given by means of the syringe. Morphia, ergotine, atropine, and ether, complete the hypodermic armamentarium of the great majority of medical practitioners, but a perusal of this work will indicate to what an extent other drugs, in addition to those, may be made to do good service when introduced by way of the cellular tissue. As regards the operative procedure the authors call attention to a practice, which is not unfrequently followed, of injecting into the *substance of the skin*, and not into the subcutaneous tissue. We have often seen the needle introduced slowly and very obliquely, so much so as not to pass into the loose cellular tissue beneath the cutis; when this is done we observe, besides the pain and resistance offered to the needle, as well as to the passage of the piston down the cylinder, an elevation of the epidermis, closely resembling urticaria spots, and leaving behind, sometimes, a superficial scar. We have always found that a rapid introduction of the needle is by far the best, and that little time need be occupied in forcing down the piston; the needle should be withdrawn with equal rapidity, the whole proceeding occupying only one or two seconds, whereas we have often seen each stage of this simple proceeding occupy considerably more time than need be taken by the whole.

The authors specially mention hypodermic tablets. These tablets are composed of an alkaloid combined with a small quantity of sulphate of soda; they are readily soluble, are stable, and always ready for use in emergencies. We have had considerable experience of these tablets, and can bear testimony to their efficiency as well as to their convenience. It is well known that solutions of all kinds are liable to undergo chemical change, and to deteriorate from various causes. Formerly we found that a morphia solution which acted well at first

gradually became unfit for use, and gave rise to excessive and protracted vomiting, probably from the presence of apomorphia; such vomiting as this rarely follows the administration of morphia in the tablet form. In order that hypodermic medication may be utilised, some such mode of preservation of the drug becomes a necessity, otherwise it is not at hand when required, and cannot be obtained without loss of time in cases where time is of value; and it is precisely in these cases when rapid absorption is desired that the hypodermic method becomes of the greatest necessity. Few practitioners would keep a series of freshly prepared solutions always at hand, whereas they may only be very occasionally required; hence the necessity for, and value of, these prepared tablets, which are likely to do more than much precept in aiding the extension of hypodermic medication.

We think that a word of caution as regards the dose of active drugs given hypodermically is not unnecessary. On three occasions we have seen patients in peril from this cause: in one case, one-third of a grain of morphia; in another case, from one-sixty-fifth of aconitine; and in a third, from one-fifth of pilocarpine. The drug once given cannot be removed again, and can only be counteracted by antidotes of a more or less uncertain character. We doubt if it is ever wise to administer aconitine by injection; if given in sufficient dose to affect the disease at all it is not unlikely to entail considerable risk from its action on the heart.

This book gives full details with regard to the drugs in every-day use: these are for the most part accurate and reliable. We notice the following sentence, which appears to be the exact reverse of what is intended:—
 “Pilocarpine is chiefly indicated in those cases where it is desirable to check or diminish excessive salivary or sweat secretion.” As regards the hypodermic use of many of the drugs mentioned, we can only endorse the following paragraph, which follows over thirteen pages on the different forms in which quinine and its salts may be administered hypodermically:—
 “In conclusion, injections of quinine salts should only be practised in cases of urgency, or where there is a difficulty in administering it per os or per rectum.” We think that the same remark might be applied to the hypodermic use of many drugs here mentioned, e.g., antipyrine, bromide of potassium, iodide of potassium, salicylate of sodium, etc., neither do we see any advantage in injecting sulphate of magnesia, seeing that it was sometimes irritating and commonly unsuccessful. We regret to find that parenchymatous injections, “do not come within the scope of our subject” (p. 178). Much interesting information is excluded under this plea, although the translator has alluded to the use of solutions of iodoform, phenol, iodine, and camphor, in pure vaseline as suggested by M. Meunier, of Lyons. It is to be hoped that future editions of this book will give full details of much work chiefly by French observers on which evidence of utility is now steadily accumulating.

R. SHINGLETON SMITH, M.D.

Manual for the Physiological Laboratory. By VINCENT DORMER HARRIS, M.D. Lond., F.R.C.P., and D'ARCY POWER, M.A., M.B. Oxon., F.R.C.S. Eng. Fourth Edition. Baillière, Tindall, & Cox. 1888.

WE congratulate the authors of this book on the rapidity with which they are called upon for a new edition, and on the improvements which they accomplish with each revision.

It contains fourteen chapters on Practical Histology; eight on Physiological Chemistry, and six on Practical Physiology. Much new matter has been introduced, but not to the extent of burdening the student with descriptions of methods which are altogether beyond his scope. The experience of many years' teaching has enabled the authors to provide for the student exactly what he wants, and we think that he who works under their guidance cannot fail to obtain a complete and accurate knowledge of the various branches of Practical Physiological work. With regard to the testing of apochromatic objectives we presume that the name "Drysdale," on p. 10, is intended for that of "Dallinger," whose results coincide with that here given. On p. 8 we observe what has frequently been repeated in text books, but is seldom done, and is altogether unnecessary, that "to use an immersion lens the mounted specimen must be sealed with marine glue, gold size, or other cement which is not soluble in cedar-oil." We confess that if this were a necessity we should rarely use the oil immersion objective; but as it is not necessary to flood the object with oil we have never found any inconvenience from an omission of the above precaution. We are glad to see an appendix on the preservation of normal and pathological museum preparations, also one on bacteria staining.

R. SHINGLETON SMITH, M.D.

A Practical Treatise on the Diseases of the Rectum. By ARTHUR COOPER, F.R.C.S. London: H. K. Lewis, 1887.

ANYBODY studying this little work, with the object of acquiring information denied him in any ordinary surgical text-book, will be disappointed. This is to be regretted, as there is ample room for a comprehensive handling of the subject on which it treats, and with the author's reputation and experience the task should be an easy one. His description of the general symptoms of rectal diseases, and of the methods of examining, is eminently lucid and practical, and equally interesting is the chapter on hæmorrhoids. The majority of surgeons, we think, will scarcely agree with Mr. Cooper when he tells us to operate in cases of strangulation where the hæmorrhoids have reappeared after reduction. Operative interference during the inflammatory stage is to be avoided whenever possible, on ordinary surgical grounds, and the author should be more explicit as to the methods of reduction, and the means to prevent a return of the hæmorrhoid. An anæsthetic surely is not always necessary, and much can be done by means of a wedge pad and strapping to keep under control a restless pile. The ligature is recommended above all other procedures; the only specified reasons over the clamp and cauterly being greater efficacy and less hæmorrhage. The objections we have found relating to the ligature are weighty. The pain which it inflicts is severe beyond compare, and we have not found difficulty at any time in the use of the clamp. Recurrence is not more frequent, the bleeding rarely of any but salutary consequence, and the patient's pain steadily decreases from the first. The instructions in the use of the clamp are not well explained, and much of the success of the operation depends upon manipulative details. Suppositories are useful adjuncts which find no place in this chapter. Not a word is mentioned regarding Mr. Whitehead's revival of excision, which is now so commonly practised. The work is well written, of a convenient size, and thoroughly practical in character, and the faults are of omission rather than commission.

ROBERT JONES.

The Evolution Hypothesis: a Criticism of the New Cosmic Philosophy. By W. TODD MARTIN, M.A., D. Lit. Edinburgh: James Gemmell.

THIS work is a criticism of Mr. Herbert Spenser's Philosophy, as expounded in his "First Principles." "My purpose," the author says, "is to deal with the theory as it undertakes to formulate the entire cosmic movement within the knowable—as it aims at the unification of all knowledge." Mr. Spenser defines philosophy as "completely unified knowledge," and seeks to attain to that unification through a universal application of the doctrine of evolution. Those who are interested in Mr. Spenser's philosophy will find all his positions dealt with by his critic in a very masterly way; but we confess that both the philosophy and the criticism are very dry reading, just about on a par with the philosophy of the unconditioned; and our impression is that Mr. Spenser's "First Principles" is a book not very widely read among medical men. Paradoxical as the statement may appear, there are, however, some little-read books which have much more influence than widely-read ones. A few of the conclusions in an abstruse book get currency and have great influence, just because few care to go to the original and see the arguments on which they are based. We believe that Mr. Spenser exerts great influence in that way, and that by no means for good. When he leaves philosophy and comes to such a subject as sociology or education his order of thinking is of a very different kind. Evolution as a working hypothesis has taken such fast hold of the scientific mind that it is not likely soon to be dislodged; and it is the only defect in Dr. Todd Martin's book that he several times goes out of his way to attack evolution as a scientific principle. We shall best estimate the true position of evolution by comparing it with embryology. That science traces the evolution of the sentient being from the primordial cell to the fully-developed adult. Among other things it unfolds the law according to which one nervous function is added to another till the highest development of mind is reached. In doing so, we may note in passing, it can no more separate between mind and matter in the adult man than it can between life and matter in the nomad with which his existence began. There is no break in the chain. The doctrine of evolution was simply a tentative application of the laws of embryology to the whole organic world. Topsy's answer to the question "Who made you?" was "'Specks I grewed,'" a reply which was considered evidence of her extreme wickedness. Scientific men began to think that growth might be the law of all organic nature, with a like result in the estimation of a great many well-meaning people. Nevertheless this application of the law of growth has proved wonderfully fruitful in bringing order out of confusion. But neither embryology nor evolution explain the innate causes of the sequences they describe. Take the case of the development of a human being. "If we follow the biologist through his long story, what does he do towards touching the mystery of genesis, or help us to conceive how a little thing, shaped like a frying-pan, and so small you can scarcely see it with the best microscope, shall carry over the shape of the paternal nose, the colour of his whiskers, and even his mode of thinking, for sixty-odd years?" If the embryologist does try to answer the question, and explains (?) to us that "an integration of matter has taken place giving rise to a definite coherent heterogeneity," we reply: That may be all very well, but to our certain knowledge the real antecedent of the man in question was a being like himself—his father. Further,

the likeness of the child to the father is only fully seen in the adult condition—a consideration which leads us to notice a favourite fallacy among certain reasoners. Dick, the Sutherlandshire Naturalist, had in his room a sketch of a classic statue of a Greek boy, so placed that the eye at the same time fell on a hideous picture of a monkey, and the naturalist, pointing to each in succession, used to ask in triumph, “Could *that* have come from *that*?” Now in point of fact the Greek boy did come from something very much uglier, for of all ugly things on the earth or under it, a four-months foetus is the ugliest, and such the Greek boy once had been. But whatever the intermediate stages of the genesis may have been, a legitimate generalization of experience is that the true antecedent of all life is one like unto the latest and most perfect development of life—even man—a conclusion which sounds very like an affirmative answer to a very old question, “Have we not all one Father; hath not one God created us?”

There is another aspect of the evolution question which it appears to us has not hitherto been given its due weight. All evolution implies a previous involution, *ex nihilo nihil fit*. You cannot roll out unless you have first rolled in. There must be not only energy, but energy at a higher potential within a finite area than outside of it in order that actual energy may be manifested in doing work. We have shown elsewhere¹ that science points to the beginning of the cosmos being an existence characterised by a very high potential of energy. A dissipation of part of the energy allowed matter as we know it to come into existence, and the energy remaining in it to be manifested as motion, heat, light, etc. Evolution as describing the history of the inorganic cosmos is essentially a progress towards dissolution. It is progress from a higher to a lower potential, tending towards the dead level of uniformly diffused heat. The passage from the inorganic to the organic is an impassable one through any known or conceivable law of energy. As Sir H. Roscoe recently remarked, although the chemist can produce by synthesis the products of organization he cannot produce organization itself, because protoplasm is a structure, not a combination; and, we may add, a structure of a different order of architecture from anything in the inorganic world. Starting with the physiological unit the history of evolution is again one of dissolution. The unit which gives rise to the differentiated units forming either the vegetable or the animal kingdom must have had a higher potential than they. It is again a progress from the higher to the lower; it is the conversion of the potential into the kinetic or actual; it is the doing of work, and work means dissolution. It is again the verdict of science that all things end in death. In the paper referred to we have suggested the hypothesis that the coming into existence of the physical cosmos involves as its correlative the existence of a spiritual one which will abide when the physical one has passed away.

There is yet another consideration. In the history of the evolution of this earth the gradual penetration of light through the surrounding cloudy element exercised a most important influence on the beings inhabiting the earth. It led to the differentiation of the function of certain cells, and to the gradual formation of the eye. The environment developed the function; but the most important part of the environment was not terrestrial but cosmic, and it would have been a profound mistake to seek the antecedent of light

in anything on the earth. When at last the clouds and mists rolled away, and the sun appeared in the sky, there was a complete apparent break in the law of continuity. There was no terrestrial antecedent out of which the sun could have been evolved. More than that, the presence of the sun at once started a variety of changes, chemical and vital, which had never occurred before. The law of continuity seemed set at naught more than ever, and order could only be restored by taking into account a cosmic evolution as well as a terrestrial one. But if the sun had no terrestrial antecedent why should such be sought for Jesus Christ and Christianity? Why should not the dim moral light of earlier ages, and the outshining of moral beauty and grandeur in Jesus Christ, have been the outcome of a cosmic evolution a portion of which alone can be seen? The present is a time when opinions and doctrines of every kind are thrown into the crucible. It would be well if teachers of Christianity would not be in too great haste in declaring what belongs to the kernel in Christianity, lest they be found contending only for the shell. A person to be trusted and imitated is a different thing from a dogma to be believed on authority. It is against this last that the scientific mind revolts. Christianity and science can never really interfere because there is the same kind of difference between them as there is between food and the chemistry of food. Chemical science will not fill an empty stomach; food will. Neither philosophy nor science can stay the cravings of our nature, Jesus Christ set forth in the Scriptures will. That in Him is life, and the life is the light of men is a fact to be ascertained by experiment, not by reasoning—an experiment all are free to make. Once the craving is satisfied it is reasonable enough to enquire why it should be so, and we believe that the relations of Christianity to the laws of intelligent being, as unfolded by modern psychology, open up a field of surpassing interest. We may at a future time refer to some of these relations which most closely touch on the domain of psychological medicine.

A. W. WALLACE, M.D.

Die Etiologische Bedeutung des Typhus-Bacillus. Untersuchungen aus dem allgemeinen Krankenhause zu Hamburg. Von Dr. EUGEN FRAENKEL und Dr. M. SIMMONDS. Hamburg und Leipzig: verlag von Leopold Voss, 1886.

THIS book of seventy pages, to which are added three chromo-lithographed plates, is divided into three sections. The first, occupying twenty-seven pages, is devoted to the description of the results of the examination of the viscera in bodies that had died of typhoid fever. The second, occupying only five pages, to the examination of the blood and intestinal discharges of living patients suffering from typhoid fever, for typhoid bacilli. The last and most important part, taking up the remainder of the book—viz., thirty-six pages, is devoted to a description of the results of numerous experiments, undertaken with the object of reproducing the disease in the lower animals. An organism—a bacillus—supposed to be the specific cause of typhoid fever, has been described by Koch, Ebert, and Gaffky, but it is doubtful whether they all described the same organism. Fraenkel and Simmonds confined their investigations in the dead body chiefly to the spleen, and found in it what they call the Koch-Ebert typhoid bacillus, in twenty-five cases out of twenty-nine. In length it is one-third the diameter of a red blood cell. It stains readily in an alkaline solution of

¹ *Provincial Medical Journal*, vol. vi., p. 163.

methylen blue, or in dry preparations in an alcoholic solution of fuchsin. It varies somewhat in size, and, when cultivated at the temperature of the room, produces no spores. There is nothing characteristic in its appearance, or in the plate cultivations. It does not liquefy gelatine, and grows without smell. On potatoes its growth is much more characteristic. Sometimes the bacillus is found in the spleen at the end of the disease, when the intestinal ulcers are healed or healing. This partly may explain the occurrence of relapses. The grouping of the clusters of bacilli in the spleen is said to be quite characteristic. But next comes the weakest part in the chain of evidence, and very weak indeed it is. *The clusters (herde) of bacilli only grow in the spleen after death.* They are not found in the spleen which is removed within 12-24 hours after death, and placed at once in alcohol. But they are readily found in the same organ if kept at the temperature of the room, but protected from external organisms by being wrapped in a cloth wet with sublimate lotion, for six hours or longer. *The bacilli are not found, and cannot be made to grow on gelatine, if the spleen is kept a week or longer, and becomes thoroughly putrid. The characteristic groups are not found in the spleen in other diseases* when it is treated in the same manner. The bacilli were found in the liver in eight cases out of fifteen. In the following complications search was made for the bacillus, but in each case without success—viz., parotitis, lobular pneumonia, lobar pneumonia, purulent meningitis, pleurisy, and retro-tonsillar phlegmon. The second part deals with the important question of the presence or absence of the bacilli in the blood, and in the intestinal discharges, during life. Hein, in 1885, withdrew blood from the spleen during life by means of puncture with a Pravaz syringe, and states that he found bacilli. But the present authors completely failed to find typhoid bacilli, either by microscopic examination or by plate cultivations, in the blood during life. Neither were they more fortunate in their examination of the blood after death. Gaffky searched for the bacilli in the intestinal discharges, but failed to find it; Fraenkel and Simmonds have examined the intestinal discharges in eleven typhoid cases, and have only found the characteristic bacilli in three. So far, then, the question amounts to this: Koch, Ebert, Gaffky, and Fraenkel and Simmonds have each described a special bacillus in typhoid fever, but their descriptions vary so much that it is doubtful if they are speaking of the same organism. That last described is not found in the blood, either during life or after death; it is not found in the spleen or other viscera *immediately* after death, but only after about twenty-four hours; and, although it is unquestioned that the intestinal discharges are the chief means of propagating the disease, this special bacillus was only found in them in three cases out of eleven. But the latter part of the book, dealing with experimental work, requires a little more consideration. It must suggest to us, either that the typhoid bacillus has really been found, notwithstanding the above improbabilities, or that a disease having some resemblance to typhoid (and in reproducing human diseases in the lower animals a *close* resemblance of clinical symptoms cannot be expected) and producing very similar lesions in the intestine, can be caused in the lower animals by other than true typhoid bacillus. Previously Gaffky had tried inoculation experiments, but without success. The animals used by Fraenkel and Simmonds were rabbits, guinea pigs, and grey house-mice. The injection of a cultivation of typhoid bacilli into the peritoneal cavity of guinea pigs was without effect. Mice treated in

the same way all died, and presented at the inspection swelling of the peripheral lymphatic glands, of the spleen, mesenteric glands, and Peyerian patches. In fresh scrapings of the spleen numerous bacilli were found. In rabbits, injections into the cellular tissue all failed, as also did injections into the lung. Two inhalation experiments also gave negative results. In five cases abdominal section was performed, and the cultivation injected into the duodenum. This also was completely without result. But of thirty-five rabbits treated by injection into the principal vein of the ear twenty-seven died, and these presented the same morbid changes in the viscera as the mice mentioned above. A very good chromo-lithograph is given showing the intestinal ulceration in these cases. In most cases the animals experimented on showed definite symptoms of illness a few hours after the injection, and generally there was diarrhoea. These symptoms usually lasted till death, which generally occurred during the first day: sometimes within three or four hours: occasionally after two to four days. If the animal survived it appeared well in about a week. Many animals survived the injection of a small dose of the cultivation, and afterwards were but little affected by a large dose of the highly concentrated mixture. *The small dose seemed to confer greater or less immunity.* In conclusion, then, although we are far from admitting that any of the so-called typhoid bacilli have yet been proved to have anything at all to do with typhoid fever in the human subject, yet the experimental results of Drs. Fraenkel and Simmonds are sufficiently definite and positive to make us anxiously await the production of further evidence, and till then we must still suspend our judgment.

H. HANDFORD, M.D.

Books which have Interested Me. British Weekly Office, 27, Paternoster Row.

It occurred to the Editor of the *British Weekly* to ask a number of men of mark, in their respective spheres, to give a statement of the books which had formed their most influential environment during their mental evolution. The answers at first appeared as articles in the journal. Twelve of them have been collected into a shilling volume, and a very curious shilling's worth it is. The Hon. W. E. Gladstone leads off with his usual post card, a *fac-simile* of which is given, announcing that Aristotle, Saint Augustine, Danté, and Bishop Butler, are the few authors by whom he has been most influenced. Ruskin has been *most* influenced by Horace, Pinder, and Danté, but adds, characteristically enough, that these are inaccessible to the general reader, and graciously volunteers the information that the following are "good for everybody." Scott, Pope's Homer, Byron, Burns, all good modern French comedies, etc., etc. "I never read English sermons or scientific books"—a statement we find no difficulty in believing. Robert Lewis Stevenson and Walter Besant give replies which will be read with interest. One paragraph from the former we must quote. "The gift of reading, as I have called it, is not very common, nor very generally understood. It consists, first of all, in a vast intellectual endowment—a free grace I find I must call it—by which a man rises to understand that he is not punctually right, nor those from whom he differs absolutely wrong. He may hold dogmas; he may hold them passionately; and may know that others hold them but coldly, or hold them indifferently, or hold them not at all. Well, if he has the gift of reading, these others will

be full of meat for him. They will see the other side of propositions, and the other side of virtues. He need not change his dogma for that, but he may change his reading of that dogma, and he must supplement and correct his deductions from it. A human truth, which is always very much a lie, hides as much of life as it displays. It is men who hold another truth, or, as it seems to us, perhaps, a dangerous lie, who can extend our restricted field of knowledge, and rouse our drowsy consciences. Something that seems quite new, or that seems insolently false or very dangerous, is the test of a reader. If he tries to see what it means, what truth excuses it, he has the gift, and let him read. If he is merely hurt, or offended, or exclaims upon his author's folly, he had better take to the daily papers; he will never be a reader." Weighty words these. P. G. Hamerton, H. Rider Haggart, Professor Stuart Blackie, Archdeacon Farrar, and others contribute each their quota to this singular collection. The character of the writer comes out strongly in some of the communications. Occasionally "very full of himself," as a lady friend of ours used graphically to describe a certain state of mind, best expresses it. Take it for all in all the book is a good shilling's worth, but if the Editor of the *British Weekly* could induce a few leaders in thought and action to make a candid confession as to what *men* have influenced them he might get a book of greater interest still. A. W.

Report of the Trinidad Leper Asylum for the year 1886.
By BEAVAN RAKE, M.D. Lond., Medical Superintendent.

A new infirmary at the asylum was opened in August 1886; it was quickly filled, has been constantly full, and has proved a great convenience in the treatment of the more serious complications, or the after treatment of operation cases. As bearing upon the hereditary nature of leprosy, Dr. Rake gives the following case:—T. B., æt. twenty-eight, was admitted August, 1885, with a six months' history of tubercular leprosy. She brought with her her child, aged eighteen months. This child was plump, healthy, and apparently free from the disease. About the middle of 1886 the child developed leprosy. This child, though it had thus been removed, at the early age of eighteen months, from its unhealthy surroundings, had developed the disease. The disease may have been incubating all this time, the mother and infant having been exposed to the same conditions. "The only really scientific test of the inheritability of leprosy," Dr. Rake observes, "would be for a child to be born of leprosy parents after they have left a country in which leprosy is endemic, and settled in a country free from the disease. If such a child afterwards developed leprosy, it would seem fair to assume its inheritability." In contrast to this case is that of a child of a severe case of leprosy, at the date of its birth, and which was under observation for a year, but no development of leprosy took place. Of seventy-three admissions, fifty-six were males and seventeen females. Thirty-one were Indian immigrants, and twenty-one natives of Trinidad. A high percentage of Coolies continues; probably these find their way to the asylum more easily than Creoles. Fifteen of the seventy-three were re-admissions. Dr. Rake has made trial of the therapeutic powers of ichthyol, but reports that

he has not found it superior to other drugs. "Friction," he adds, "probably plays an important part in its therapeutics." W. B. KESTEVEN, M.D.

Short Notices.

Medical Diaries and Visiting Lists.

THIS is a season for special activity amongst the publishers of diaries and visiting lists, and they are provided in numerous forms to suit the requirements of all kinds of practice.

1. *Smith's Visiting List.*

It was some time in the early fifties that we first made acquaintance with "The Visiting List." We are not sorry to have said good-bye to our old friend. May he have long life and much usefulness before him! We hope all our readers, who are in active practice, possess a copy of the List. How else can they keep their engagements? Besides the list pages, it contains much useful information; but the pages most suggestive of thought are those devoted to the dosage of all the medicines, official and non-official which are now in use. There are nearly eleven pages thus occupied. There are fifty-one remedies on each page; about five hundred and fifty in all. Within twelve years of our entering the twentieth century we have this farrago still in use, the actions of one-twentieth part of which have never been submitted to anything approaching to scientific examination, and new remedies pour in on us still! Farther, it is believed that it somehow fits a man for the care and cure of the sick, that he should not only remember the doses of these five hundred and fifty articles which are supposed to have some curative effect in disease, but also to tell where they came from; if they are organic, what natural family they belong to, and besides all that the proportions used by the manufacturing druggists in making compounds of them. Verily the folly and credulity of man is wonderful! W.

2. *Letts' Diaries.*

The practitioner could not have a better pocket-book than Letts' Diary and Daily Visiting List. It is replete with useful information, portable, and admirably adapted for all classes of practice.

3. *Silverlock's.*

These well-known publishers of medical sundries also produce a useful visiting list made in different sizes, so as to embrace a small and large number of patients. There is a large number to select from.

The Scientific Enquirer: a Monthly Medium for the supply of information on all Scientific Subjects. Edited by ALFRED ALLEN. Vol II., No. 12. London: Baillière, Tindall and Cox.

WE regret that Mr. Allen is obliged, owing to ill-health, to discontinue the publication of this very useful journal, which has served as a medium of communication between persons interested in scientific work. We are pleased to note, however, that Mr. Allen will be able to edit the *Journal of Microscopy and Natural Science*, in which several improvements will be made, and new departments opened.

The Provincial Medical Journal,

JANUARY, 1888.

IN commencing the New Year, and another volume of the *Provincial Medical Journal*, we take the opportunity of thanking our subscribers and contributors during the past year. Numerous letters received have conveyed to us the pleasing intelligence that the paper was favourably received, and well spoken of by critics of known repute. We have aimed at making the paper useful to all classes of the profession, and we believe we have succeeded in a certain measure in our endeavours. During the year 1887 we published many Original Communications of great value, written by specialists, consultants, and general practitioners, and we believe this portion of the journal has been appreciated. In the department devoted to reviewing we have been able to secure the services of thoroughly competent critics, and we refer with some satisfaction to the reviews in this month's issue. The reviews are signed, a feature which we think should be adopted by our older cotemporaries. Matters of interest affecting the profession in all its relations have been treated of by different writers in our Leading Articles, and we can point with pleasure to the stand taken by the *Provincial Medical Journal* to vindicate the freedom of the profession against an oligarchy which sought to dictate what candidates they should elect to the Medical Council. The vast machinery of the British Medical Association was utilized in opposition to the wishes of the members in that election, and had not the *Provincial Medical Journal* existed, we should have been silenced. The Council of the British Medical Association acted precisely as the Council of the Royal College of Surgeons of London are now acting. The *British Medical Journal*, pledged to neutrality, violated its compact. We had to fight the Association staff, and though unsuccessful, we vindicated a great principle. In our Annotations we have noticed many details of minor interest. The great value of the Notes on New Remedies has been testified to us by numerous correspondents. These notes are written by one well acquainted with the newest products, and who has exceptional opportunities of estimating the value of them. Under the heading Periscope we have been able to give a survey of what has been done in nearly every civilised country, so the busy practitioner can in spare moments pick up useful hints, and obtain, as it were, a bird's-eye view of the general literature of medicine. During the coming year we hope to introduce other improvements, so as to make the journal even more valuable than it is now. The journal is run on independent lines; it belongs to no *clique* or party; it does not favour one section more than another, and it is well deserving of support.

THE advertiser of a patent medicine quotes PLATO'S "Meditation on Immortality" to attract attention to his cure-all. Poor PLATO! Churchmen on behalf of the prophet might well invoke "the prayers of the congrega-

tion," for this is an immortality he did *not* meditate upon. "O blessed health!" . . . wrote the author of "Tristram Shandy," and this same mimic of matters medical apes him. Yet these are trifles. The mind which will assert that what is in fact simply a saline aperient, will eradicate or cut short almost all the ills that trouble tribulated man, will surely not hesitate to borrow the inspired writing of classic genius for the means of saying, go. But this article is not concerned with advertisements—directly, at least; it is with what they suggest, for their number and variety give conclusive proof that their purpose is a large one, that the concoctions or compounds to which they apply have a very general use, and it is to this we would more particularly refer—this blind faith in them by a large body of our general public, which surely evinces a reprehensible want of reflexion on their part. The matter of health is very properly regulated by instinct in the lower animals, but when instinct is overruled by the dominant force of reason, as in man, it does show the *perverseness* of his nature that he should still follow the primary form of intelligence. Why is it that man will not apply the same arguments in reference to his physical well-being, and draw the same logical deductions therefrom that he would if reasoning upon any other single matter? Because, though health be the whole soul of his existence, the loss of it is never calculated upon. Consequently when such a calamity overtakes him, as it may overtake anyone, his faculty of reason vanishes before it, and, like those of a drowning man, his actions become impulses, prompted merely by the instinct of self-preservation—possessing nothing but faith, he will now clutch at the ideal straw which most hopefully flatters his unreason with returning health. The age of miracles, at least the scientific belief in them, has gone, yet there clings to the learned and unlearned alike an astonishing faith in the impossible. Let the empiric appear upon the scene at this juncture, offering a remedy, in words which intelligence and healthfulness smile at, and he will be believed—only let him enshroud the cure in a little mystery, and shout its wonders with sufficient assurance, and it will most certainly be tried. "The longer I live," wrote the clever, though occasionally petulant wife of CARLYLE to a friend, "the more I am certified that men, in all that relates to their own healths, have not common sense." As a broad statement this may be accepted; first, for an already given reason, and in the second place, as WILLIAM CULLEN wrote, because "neither the acutest genius nor the soundest judgment will avail in judging of a particular science in regard to which they have not been exercised;" and he proves this by saying: "I have been obliged to please my patients sometimes with reasons, and I have found that any will pass, even with able divines and acute lawyers. The same will pass with the husbands as with the wives." Again, as another famous medical man, the author of *Religio Medici*, said: "There are a set of heads that can credit the relations of mariners, yet will question the testimonies of St. PAUL"—heads with ears more open to rhetoric than to logic. Amidst such

a humanity the professional charlatan must always find abundant employment. HOMER by the mouth of SARPEDON has it that "ten thousand fates of death do every way beset us, and these no mortal may escape nor avoid," and the most unthinking of unthinking men may verify this every moment of their existence. As rational beings then, is it not a duty to anticipate physical calamity, and reason upon our mode of action under such a probable contingency? It is not necessary that we should exercise our judgments specially upon medical science for this purpose, it is not even desirable; but it is both necessary and desirable that we should do so upon the professors or practitioners of this science; a duty simplified when our judgments are limited to the legitimate exponents of it—for surely we must believe that a profession of men specially devoted to the study of what concerns our physical being, knowing all the traditions of their profession, learning all the available knowledge in it, and in the constant exercise of that knowledge—surely we must believe that that profession ought to know most about health, and ought to be best qualified to deal with the morbid variations of it. But we so seldom reason innocently now-a-days that a simple truth rarely strikes us, and this view of the medical profession is a strange one to many. Given one of these unexpectedly attacked by sickness, then the charlatan at hand, volubly vaunting the imaginary and miraculous powers of his one remedy, arrests first the attention, then dupes the reason. What is this remedy—of what does it consist? It may be the original prescription of a legal practitioner, which served its purpose in the instance of this man's own person, who, imagining he has discovered a marvel, unscrupulously hastens to make a monetary use of it, for our country owns no law to prevent him so doing. The nostrum of such a man reminds one of an ignorant novel-reader, who perfectly unacquainted with even the elements of composition, much less having a knowledge of character, or the ability to conceive a plot, reads a story, in the course of doing which he finds an incident which makes him laugh heartily. Straightway he goes and retails this incident to his first acquaintance, in the belief that it will so act on him, without considering, or failing from ignorance to choose, the selfsame circumstances under which it affected himself. It is here where the necessity for educated and practical experience show themselves in medical men—in the ability to judge the moment and the man. Professor GAIRDNER, of Glasgow, once said that "Treatment is an application of common sense, under scientific discipline, to all the circumstances of the case." *To all the circumstances of the case*—for, were all constitutions alike, and all diseases distinct and affecting man always in a precisely similar manner, then the diagnosis and treatment of them might be tabulated and placed in every household, capable of being recognised and applied by anyone simply able to read. But most unfortunately for mankind, his ailments are modified by many circumstances, and seldom admit of uniformity of treatment. This demands an additional gift even from the trained practitioner—a gift upon which the

late Dr. JOHN BROWN, of Edinburgh, thus dogmatises:—"No amount of scientific truth, the most accurate and extensive, can in medicine supersede the necessity of the recipient of all this knowledge having, as RICHARD BAXTER says, by nature 'a special sagacity'—a naturally searching and conjecturing turn of mind." In practice, therefore, medicine must ever remain more of an art than a science, but with science for its basis it must be progressive, progressive in exactness. When the skilful members of a skilled profession then, have so much difficulty in coping with disease, it surely requires no effort of thought to illustrate the absolute foolishness of trusting to others, whose want of knowledge is only equalled by their want of scruple, and to confide in preparations, the only guarantees of which are the assertions of advertisers, plainly unprincipled in their object. But again, many people attempt to rectify their indispositions by aid of quack medicines, who are influenced largely by mistaken notions of economy—they grudge the necessary though by no means exorbitant medical fee. Penny wise and pound foolish people there will probably always be, but they might accept the trust of the author of *Sesame and Lilies* as authoritative upon the point: "So of doctors," he says, "they like fees no doubt, ought to like them; yet if they are brave and well educated, the entire object of their lives is not fees. They, on the whole, desire to cure the sick, and if they are good doctors, and the choice were fairly put to them, would rather cure their patient and lose their fee, than kill him and get it." This again is but an echo of what was written long ago by a physician himself, Sir THOMAS BROWNE: "I desire rather to cure his infirmities than my own necessities. Where I do him no good, methinks it is scarce honest gain, though I confess 'tis but the worthy salary of our well intended endeavours. I am not only ashamed but heartily sorry, that besides death there are diseases incurable; yet not for my own sake, or that they be beyond my art, but for the general cause and sake of humanity, whose common cause I apprehend as my own." Thus spoke a true disciple of HIPPOCRATES, who regarded four qualities as indispensable in every good physician—Humanity, Probity, Learning, Sagacity—which qualities are becoming recognised more and more daily, as those which govern the intentions of the profession at large.

AMONG the social evils of the day, a foremost place must be accorded to the thoughtless indiscriminate doings of those people who persuade themselves that the mere act of giving is being charitable. No course of action is more pregnant with bad results, more insidiously mischievous, more demoralising, more destructive of independence of both feeling and character, than indiscriminate charity. It is not charity, it is merely casting money into an abyss; for it is swallowed up, it disappears and no good results. The charity of the day consists not in seeking out and helping the poor, but in giving to all and sundry who will accept, giving alms to all who simply plead poverty. No care is taken to ascertain or prove that the recipients are genuinely

poor, that they are worthy of help. All workers among them unite in telling us that no section of our population are more independent, more proud, more strongly averse to betraying poverty, than the real poor, those who are reduced to want, to starvation and misery by the inevitable force of circumstances. Such people have to be looked for, they do not put themselves forward. In the looking for these, lies the kernel of the whole matter. Visiting means trouble, labour, disagreeableness perhaps, and so an easier way of satisfying conscience and avoiding exertion is to give the money, leaving to others the visiting—the finding out of people who will accept the *dole*. This is not charity, it is merely playing at it; there can be no charity when there is no definite object, no exact purpose to be fulfilled. When no steps are taken to ensure that such gifts are properly applied, that they find their way to deserving subjects, there is bound to be abuse and misapplication. The most cursory examination of the working of our almost innumerable so-called charitable institutions shows this to be the rule to an alarming extent. It is not too much to say that in the majority of our free institutions actual poverty is a barrier, almost a disqualification to being received. The increase in these institutions in the United Kingdom during the last forty years has been hundred-fold; in London alone, forty years ago there were 73 institutions, to-day there are 252; in the whole of the United Kingdom there were only 293, while to-day there are 1316! Of all these institutions there is not one which is not appealing to-day for more funds, more money to spend in giving away things for nothing; year by year these institutions have been more hardly pressed. That they are spending all their funds is no more than true, but upon whom and for what purpose? Not upon the poor alone! The reason is that the number of recipients has increased, the number of people who, anything but poor, are yet so lost to self-respect, to honest independence, as to have no scruple in accepting “charity.” During the whole of these forty years the country has been increasing in wealth, and yet there are a thousand-fold more people who are ostensibly poor. The truth is that they receive every encouragement, they are positively invited to come. We have been engaged in the examination of the reports of fifty of the leading London hospitals, and fifty of the leading provincial hospitals and institutions, and in all, during ten years only, the increase has been steady and enormous, but in an infinitely greater ratio than that in which the population of the country at large has increased during the same period. After sifting and weighing all the facts contained in these reports, we are forced to the conclusion that each of these institutions is engaged in rivalry to all the others, as to which can *spend the most money*, and show the *largest number of applicants in the annual report*. It is simply impossible to gainsay these facts. The question of hospitals is only one section of the matter, but it is that which most concerns our profession. There are many causes bearing upon this which space does not permit being referred to. One cause, however, which we commend for

the consideration of the profession, is the extreme readiness which so many medical men have in giving their services to all and sundry gratuitously, if only they are given through some professedly charitable institution. This is one factor in the case, but it is not a slight one by any means. The consequence of such a state of matters is bad, not only for the medical profession, but for the country at large. The people are rapidly becoming pauperised—their independence is being destroyed, their moral feelings are becoming blunted, and the disposition to provide for themselves is necessarily eradicated—but besides this, a class of people is being created who live upon other people, so to speak, without any effort on their own part, who become hypocritical, shamming, plausible hangers-on to those who do not take the trouble to consider to whom they are giving. The chief offenders, we feel bound to say, in encouraging this state of things, are the clergy. In this we feel sure we will be supported by most of our profession. The idea is encouraged that there is no need to be provident, no need to lay by for the day of sickness, but wait till that day comes, when help can be begged for, or application made to some *institution* or *hospital*. The idea is fostered that these institutions are for the public generally, and not for the poor especially.

W.

THE working classes are at length beginning to realise the fact that there is something very unsatisfactory to themselves in the present mode of club (medical) practice. They begin to observe, in the first place, that they do not get the best men to accept such appointments; in the second, that the value of their treatment is exactly in proportion to their payment; and in the third place, that they are bound, under penalty of losing benefit, to submit themselves to the treatment of the club doctor, whether he be an able man or not. A working-man expressed his opinion thus: “Ah! for a penny a week we only get penny a week medicine.” This is indeed true. But a working-man, who happens to be ill and not getting on, and feels that he would like to seek other or more skilled advice, he naturally thinks it hard that by so doing he should not only have to pay for this advice, but at the same time lose all pecuniary benefit from his club. He pays so much regularly in order to receive help when *unable to work*, and not to support a particular medical man. He considers that he should have the right to consult any medical man he chooses. This is only fair and right. The power to grant or withhold benefit, however, lies almost entirely in the hands of the medical officer of a club, who thus possesses a means of punishing any member who goes past him to consult another. A case tried in a Staffordshire County Court a few days ago has a most important bearing on the matter, and will serve as a warning and a precedent. From the facts supplied to us we learn that a young man of good character and steady habits became affected apparently with lumbago, and consulted the medical officer of his club. After a fortnight’s disablement, finding no

improvement, he consulted the medical officer of another club, who treated him for eight weeks without apparent benefit. Finding still no improvement, he went to the County Infirmary, where he was relieved, but was found to have more serious mischief at work than ordinary lumbago. After a week at work, he again became disabled, and applied to his club. Here, however, although he received medicine, he was refused a certificate on the ground of *shamming*. He then applied to a gentleman practising near, who treated him for a short time with varying benefit, and then sent him to consult a very eminent surgeon in an adjoining town, who also treated him with the same result. His means being now exhausted, and deprived of all club money, he was compelled to apply to the Union medical officer, who treated him for a time, until on receiving a communication from the *medical officer to the patient's club*, he suddenly refused to give him any further treatment. To crown all, the poor fellow, now entirely disabled and reduced to want, was expelled from his club as an *impostor*. Being advised, he brought an action in the County Court, when, on hearing all the evidence, the Judge decided that he was not an impostor, ordered all arrears to be paid, and the man to be reinstated. It was pleaded that this was a case of persecution, simply because the poor man sought other medical advice. The attempt to prove imposture rested entirely with the two club surgeons; but the circumstance that neither of them discovered that the man was an impostor until they learnt that he had gone elsewhere was significant; and the fact that neither of them discovered any imposture until after they had finished treating him was more significant, and virtually settled the case. One of the surgeons was shown to have given medicine to relieve an ailment which at the same time did not in his opinion exist. The Judge, in summing up, termed it a paltry case, and gave judgment for the plaintiff, with full costs, which, as the clubs had arraigned counsel and a string of medical witnesses, were very considerable. We believe this case stands alone in the history of club practice, and we hope it will for ever remain an isolated case.

Annotations.

“Forsan et hæc olim meminisse juvabit.”

THE PETITION OF THE LONDON COLLEGES RE MEDICAL DEGREES.

THE Royal College of Physicians and the Royal College of Surgeons, of London, have at length formulated their official petition in reference to degrees in medicine. The colleges desire to have the power of conferring the degree of B.M., B.S. and M.D. If this petition be favourably received by Government the Apothecaries' Society will be left out in the cold. The spirit of monopoly is manifest all through the petition, and we feel sure that no Government will sanction such a scheme as the one proposed.

PRESCRIBING MADE EASY.

A CORRESPONDENT has forwarded us some cuttings from a publication, edited by a well-known medical man, asking our opinion on the propriety of this method of prescribing. We give the samples sent us:

TALMUD.—Wash the feet with Blue Gum Tree or Iodoform Soap night and morning, change your socks frequently, and dust on your feet, after washing, a little of Woolley's Sanitary Rose Powder. Internally, take fifteen drops Fer Bravais, after your meals, in water, thrice daily.

W. L.—We advise you to live generously, and, in place of your alcohol, to take with your meals Boköl, which, as a pure and nutritive malt beverage, will do you good. Take, also, after your meals, a dessertspoonful of Thomson's Cod Oil Cream (Dublin-street, Edinburgh), as you evidently require such a lung-tonic and general nutrient. Clothe warmly all winter in the Sanitary Wool Clothing such as is made by Messrs. E. Ward & Co., of Bradford.

BOLSOVER.—The St. Jacob's Oil may do much good in a case such as that you describe. It is a most excellent liniment, and has proved serviceable in our hands.

MOTHER SEIGEL.—1. Try applying hot dry salt in a flannel bag or stocking; and sleep in woollen gloves. 2. Give plenty of fat with starchy foods—such as Marshall's "Tritola," W. Polson's Corn Flour, and like dietary.

The method has this merit of simplicity: the drugs, foods, etc., recommended are all to be found in the advertisement pages, and the advice appears to be meant to encourage their use. As to the propriety we hardly think there can be any need of our giving our opinion. It rests with the Medical Council to decide the point whether such a system is professional.

AN ARTIFICIALLY-PRODUCED RABIES.

DR. PEYRAUD describes in the *Union Médicale* the biological effects of the essence of tansy. The injection of two drops of the essence of tansy causes in the rabbit the most sudden and violent convulsions. The convulsive movements are extremely violent. There is grating of the teeth, biting the tongue, salivation sometimes bloody, blanching of the mucous membranes, evacuation of the bladder and rectum, and rapid spasmodic respiration. A slight excitation will excite a spasm, as in strychnia poisoning. The sense of hearing is over-sensitive. Consciousness is apparently not lost. These convulsions last from fifty to sixty minutes, and, if the dose of the drug has been too large, the animal may die of asphyxia. During this convulsive period the animal bites at everything that comes within his reach, even the ground and his own paws. This biting, with the convulsive manifestations, makes the attack look very much like hydrophobia. After the convulsions comes a period of coma, lasting two or three hours, during which the animal appears insensible to all excitations. The lesions produced in these cases are subpleural hæmorrhages and hæmorrhagic infarction in the liver. Dr. Peyraud calls this "tansy" rabies. In a note presented to the Academy of Sciences, Paris, November 21st, 1887, Dr. Peyraud gives us further particulars on the affection. The paper is published in *Gazette Hebdomadaire des Sciences Médicales de Bordeaux*, 27th November, 1887.

THE COMPOSITION OF SEWER AIR.

THE results of the experiments of Professor Carnelly (Dundee) and Mr. J. S. Haldane, on the air of buildings and sewers, if confirmed by further experimentation, will produce a revolution in current medical opinion. The authors publish the following paragraph:—"The results of these researches will perhaps tend to mitigate some of the terror with which we have come to regard sewer air. Sewer air has been commonly supposed to be loaded with micro-organisms, whereas it turns out to be some of the freest air from mud-organisms that can be found. It may be answered that it is not a matter of quantity but quality. There may be very few germs, but they may be deadly ones. Doubtless they may be, but until we have some reason for supposing that this is the case, the presumption is that they are no more hurtful than other germs which are flashing about everywhere." They then attack the prevailing opinion that typhoid may be, or is, caused by sewer air. "What is the supposed evidence?" they ask. "We may dismiss at once as absolutely worthless collections of cases in which something has been found wrong with the drains in a house where a case of typhoid has occurred, or where the patient has been found to have sniffed at a sewer grating or ventilating pipe shortly before his illness. What one would require to know is, whether the proportion of cases occurring amongst those most exposed to sewer emanations is greater than in those less exposed." In reply to the above we may say that all who are exposed to sewer air do not contract disease, this we assume will be granted. It is very significant, in our opinion, of the ill effects of sewer air, that in houses where sewer air has been admitted, the general health of the inmates has deteriorated; when the sewer air is excluded, in same houses, the inmates improve in health. Few would willingly live in houses in which sewer air entered freely. Microbes and germs are not the only factors in the causation of disease. Herein lies the weakness of the researches above referred to.

THE REGISTRATION OF THE BRUSSELS DEGREE OF M.D.

THE medical graduates of Brussels University can now register their degrees by the payment of £2. Since 1868 some six hundred have presented themselves, but it is not known how many have passed. Still, it will be a nice little sum towards the expenses of the Medical Council if they all register their degree.

THE MEDICAL COUNCIL.

THE Medical Council commenced its session on Nov. 22nd, and it may not be unprofitable to summarise its proceedings. After the address of the president, John Marshall, F.R.C.S., the case of Mr. Partridge was considered, and then referred to the Dental Committee. A bust of Sir George Paget was presented to the Council, and a report on the subject of unqualified assistants gave rise to a very prolix discussion, involving a great waste of time and money.

The case of Mr. Henry A. Allbutt took up the sittings on Wednesday, Thursday, and part of Friday, resulting in a decision that Mr. Allbutt's name should be erased from the Medical Register. The Dental Committee reported adversely to Mr. Partridge, and his name is also to be erased from the Dental Register. The Society of Apothecaries applied for sanction to institute a diploma in Public Health, but on the ruling of Mr. Mackenzie the Council were unable to sanction this application. A report on the registration of foreign degrees in medicine was received and agreed to. A subject most interesting to the Council took up almost the whole of Saturday. This related to the payment of the representatives. A report was presented on income and expenditure, which was referred back to the committee for further consideration. The registrar's remuneration was increased by £100 a year. Mr. Millar has so well discharged his functions that few will object to this outlay. Mr. Teale proposed a resolution that it be referred to the Executive Committee, to consider under what circumstances a medical practitioner would render himself liable to the censure of the Council by the employment of unqualified assistants. Mr. Teale said that his object was to insure notice being sent to all registered practitioners, so that they might not plead ignorance of the wishes of the Council. Mr. Orme had been reprimanded by the Council, and pleaded that he was not aware of the action of the Council against unqualified assistants; he was told to go and sin no more. This was not a brilliant session fraught with great results, but we think it has been one not altogether fruitless.

ARMY MEDICAL RANK.

THE Secretary of State for War has made a very important concession to the requisitions presented on the subject of relative rank, by directing that in future whenever a medical officer's name appears in the *London Gazette*, on appointment or promotion in the department, his corresponding military rank shall be announced, together with his departmental rank. This letter marks a departure acknowledging the justice of the agitation raised by the British Medical Association, the corporations and colleges over the question of the abolition of relative rank.

A VIRUS DESTROYER.

DR. MACCALL thus describes his virus destroyer:—"The composition of the cones in the "virus destroyers," sample of which you have seen, will be nitrate of potash ten parts, and corrosive sublimate two parts. The composition, however, is not the main point; I only chose corrosive sublimate because it is the strongest at present known, and will keep without risk or loss. The main thing is to have an antidote at hand for instant use. They can be made cheaply, and be in the hands of everyone; and for the poor, the police could carry them and be instructed in their use. At present it is the delay that is so fatal before aid can be got, and in many outskirts, etc., no help is near. Their use is not meant to supersede

medical advice, which could be sought as hitherto, but the sufferer would then be treated with the virus probably destroyed, and not as now, after it has been absorbed. A dog bite is usually a superficial scratch or tear, and not a sharp puncture; and even if the canine teeth be inserted deeply, the saliva gets mainly or entirely rubbed off and left on the surface. The lunar caustic still used is decomposed into chloride, and so rendered inert. Setting aside extreme cases (which I believe are attended with least risk on account of copious bleeding), in by far the majority of cases the "virus destroyer" would destroy the virus. Full directions would be given with each, and instructions that after use a doctor should at once be sought. The *moral* effect, too, of the use of these would be great, as Mr. Rotherham truly says, many of the deaths arise from fear, and I have no doubt that in those fatal cases, where even the parts bitten were excised, either it was done too late, or the bad result was due to mental impression."

A PRIZE FOR A MEDICINE CABINET.

PRACTITIONERS who dispense their own medicines find it very convenient to have a lock-up cabinet, that will hold a well-assorted stock of drugs, besides instruments and the various utensils required for dispensing purposes. Some of the cabinets in the market are favourably reported on by medical men, but they do not appear to be as perfect as could be desired; there is room for improvement in design and construction. As medical men are likely to know what form such a cabinet should take, and what drugs and instruments it should hold, Messrs. Richardson and Co., Leicester, offer a prize of £5 5s. for the best design. The following are the conditions:—

1. Sketch required, showing cabinet open and shut.
2. A list of medicines must be appended.
3. A list of instruments, utensils, must also be furnished.

Special attention should be given to compactness, whilst at the same time elegance must be aimed at. Competitors must send their designs under a *nom de plume*, on or before March 1st, 1888, to the office of the *Journal*. The name of the successful candidate will not necessarily be published,

TWO IMPORTANT MEDICO-LEGAL CASES.

THE following cases illustrate the perils of practice:—In one case Dr. Latty was charged with unlawfully signing a certificate, under which the complainant was sent to the County Lunatic Asylum. The case was dismissed without the defendant being even called upon. The certificate was signed in 1882. Dr. Latty must have been put to unnecessary expense, apart altogether from the worry incident to all legal proceedings, and unfortunately he has no redress. The other case, of Dr. Stevens, presents some rather novel features. Dr. Stevens attended Mrs. Kitchener in her confinement in 1884. She died from scarlatina; the husband when applied to for Dr. Stevens' account, sent a letter, in which the following words appeared:—"I shall never pay him unless the law compels me, and that I do not fancy it

can, as I could more easily indict Dr. Stevens for manslaughter." Dr. Kitchener attributed blame to Dr. Stevens in visiting his house after coming from a scarlatina patient. The case came before Justice Hawkins, who decided that the letter was privileged, though no imputation rested on the professional character of Dr. Stevens. Mr. Kitchener wrote the letter honestly, and there was no evidence of malice. This is a very important case for general practitioners, and is well worth forming the subject of discussion at some of our societies:

THE MEDICAL SICKNESS, ANNUITY, AND LIFE ASSURANCE SOCIETY.

THE last meeting was held on December 7th, when the chairman, Mr. Ernest Hart, gave a retrospect of the progress of the society during the year now ending. During the year different members received payment, the aggregate sickness being over 500 weeks, and entailing an expenditure of £1600; the various claims varied from one week to one year. It was gratifying to know that although the claims had been very numerous, they were fewer than those allowed for by the actuary, Mr. Neison. The reserve capital now amounted to nearly £21,000; of this £20,000 had been invested in first-class securities. One factor which greatly added to this was the very small cost of management. The whole of the work of the managers was done without fee or reward. Over 100 new proposals had been received during the year, and the society has over 800 effective members on its books, with an annual income from premiums of £9,000. Full details and tables can be obtained from Mr. Radley, secretary, 26, Wynne-road, Brixton, London.

IRISH MEDICAL SCHOOLS AND GRADUATES' ASSOCIATION.

WE were unable to publish in the December number an account of the general meeting of this now important Association, which took place on Wednesday, November 23rd, 1887, at 49, Berners Street London. The following members, among others, were present: Sir Thomas Crawford, K.C.B., Director-General A.M.S., President, in the chair; Professor Yeo, Professor A. Macalister, Drs. Gilbert Smith, Macnaughton Jones, Phillips (Reading), Dickson Smyth, R.N., Brigadier-Surgeon Alexander, Drs. Waring (Brighton), Gaven, and Stewart and Abraham (Honorary Secretaries), etc.

The Council reported further proceedings, with reference to the exclusion of those holding Irish medical degrees and the higher diplomas of the K.Q.C.P. and R.C.S.I. from English hospital appointments. Professor Yeo, on behalf of the Council, moved (1) that "the name of a newly elected member shall not be entered on the roll until the first subscription be paid;" and (2) "that the second paragraph of Rule XI be altered so as to read as follows: 'There shall be two other Association dinners each year, at such times and places as the Council may determine.'" The Secretaries reported that the number of members in the Association

had now reached 515. A vote of thanks to the President for his assiduous and valuable services to the Association was proposed by Professor Yeo, and seconded by Dr. Jones, and carried unanimously. A vote of thanks to the General Apothecaries' Company was also passed for the use of their premises.

In the evening the members dined together at the Holborn Restaurant, Sir Thomas Crawford in the chair, and Sir B. W. Foster, ex-President, as Vice-chairman. A telegram was received from Dr. Bridgwater, President of Council of the British Medical Association, regretting his absence as a guest. After the usual loyal toasts, the President proposed "Our Guests," which was responded to by Professor Pettigrew, F.R.S., and Dr. McVail, of Glasgow, members of the General Medical Council. Dr. Macnaughton Jones then proposed the toast "The Universities and Licensing Bodies," coupling with it the name of Professor Macalister, of Cambridge (President-elect of the Association). The toast of the evening, "The Irish Medical Schools and Graduates' Association," was ably given by Professor Struthers, of Aberdeen, and Professor Jacob, of Dublin, replied. Professor Humphry, of Cambridge, gave "Our Chairman." The proceedings were enlivened by songs sung by Mr. Payne, Mr. Baby, and Dr. Macan. Amongst the other guests present were Mrs. Garrett Anderson, Professor Galloway, and Dr. Donald MacAlister.

New Materia Medica.

Sutherlandia frutescens.—This drug has recently been sent over to this country from the Cape of Good Hope as a remedy for cancer. It consists of the foliage and stalks of the plant, which is a leguminous shrub, bearing bladdery thin-shelled pods, something like those of bladder senna. On this account it is known under the name of the Cape bladder senna in English gardens, where it is sometimes cultivated on account of its large scarlet flowers. At the Cape of Good Hope the powdered leaves and roots have long been used in diseases of the eye, but its use as a remedy for cancer appears to be of recent introduction. It is reported that the drug will shortly be tried at the Brompton Cancer Hospital.

Hydrobromide of antifebrine has recently been prepared by a London chemist, with the view of its possible value in cases in which a high temperature is accompanied by delirium, and experiments as to its value are stated to be in progress.

Sulphibenzoate of sodium is the name of the last new antiseptic. According to M. Heckel (*Comptes Rendus CV.*, p. 896), it is prepared by dissolving sodium benzoate in a strong solution of sodium sulphite. It is said to be very soluble in water, and to be absolutely innocuous to human beings, even if taken in large doses. It has been tried in the Hospital of Saint Mandrier, and it is reported as the result of the clinical experiments conducted there, that a solution made by dissolving four or five grams in a litre of water, is superior to carbolic acid as an application to wounds, and that it may be compared in value to the salts of mercury without having their poisonous properties, or to iodoform without its disagreeable odour. The physical and chemical properties of the compound have not yet been published.

Schleichera trijuga.—The oil of the seeds of this sapindaceous tree has recently been introduced into Germany under the name of macassar oil. The tree is common in the East, from India to Macassar, and the oil is used as a remedy for the itch. In Germany it is recommended for its stimulant action in diseases of the scalp.

Bidens bipinnata, a composite plant which has long been used in the United States by irregular practitioners in the treatment of asthma and bronchial catarrh, and is locally known under the name of Spanish needle or beggar's tick, is now mentioned in the *Therapeutic Gazette*, p. 756, as being recommended by Dr. C. R. Gaul, of Jacksonwald, Pa., in the treatment of hay asthma. In this distressing complaint he is said to have employed a decoction of the plant with extraordinary success.

A new mydriatic alkaloid is stated to have been obtained from *Ephedra vulgaris*, a plant of the natural order Gnetaceæ, by M. Kinnosuke Minra. It does not paralyse the accommodation for near vision.

New Remedies.

Phenacetin is the new and more convenient name which has recently been given to acetiphenetidin or acetyl-amido-phenol. The properties of this substance have now been published more fully (*Pharm. Centralhalle*, Nov. 24, p. 583). It is in the form of a powder, of a faintly reddish tint, is odourless and tasteless, dissolves with difficulty in water, is rather more soluble in glycerine, and is more freely soluble in alcohol, especially when heated. It is insoluble in either acid or alkaline solutions, and does not appear to dissolve either in the acid juice of the stomach or in pancreatic extract. It seems rather remarkable, therefore, that when administered to fever patients in doses of 0.3 to 0.4 gram, it should invariably produce a marked antipyretic effect, all the more as that according to Professor von Bamberger, doses of 0.5 to 0.7 gram administered to healthy persons produced hardly any effect.

Antipyrin is stated by M. Dupuy to have proved valuable in the treatment of sea-sickness. He gave to some persons, who had previously suffered much from sea-sickness, three grams daily of antipyrin for three days previous to embarking, and for three days following. Others continued to take the medicine throughout the voyage, and all of them crossed the Atlantic without suffering from sea-sickness. This action of antipyrin is confirmed by M. Ossian Bonnet, who found it effective in sixty cases which occurred during a voyage to Buenos Ayres and back. The dose required was variable; in most cases 1.50 gram was sufficient, the complete effect being produced in about ten minutes. In some cases the dose had to be repeated, but it was never necessary to give more than three grains to produce cessation of the sickness within an hour. In cases in which the sickness was so incessant as to prevent absorption; one grain of antipyrin hypodermically injected was found to be quite effectual.

Naphthol, or more correctly β -*naphthol*, is stated by M. Bouchard (*Comptes Rendus, CV.*, p. 702) to be less poisonous than was previously supposed, and in the pure state to be non-poisonous in much larger doses than are required to produce valuable antiseptic effects in the system, as for instance in the intestinal canal. Experiments have been made with cultivations of certain bacilli, in order to determine the dose necessary to produce marked antiseptic results. One of the pathogenic bacilli chosen for this purpose was one that secretes pyocyanine, and another was a species taken from the intestines of rabbits, and which secretes a green fluorescent matter. It was found that β -naphthol added to a cultivation of the first-named bacillus, in the proportion of 0.40 to 1000 grams, retarded the multiplication of the microbes, and prevented the formation of the coloured secretion, while if used in the proportion of 0.66 gram to 1000 grams, the development of the microbes entirely ceased. The proportion of β -naphthol (0.40 gram) producing this effect was found to be equivalent to 0.025 gram of biniodide of mercury, 2 grams of carbolic acid, 1.6 gram of creosote, 1.27 gram of iodoform, 2.7 grams of iodol, and 1.51 gram of naphthaline. It was found that the lethal dose for a rabbit was 3.6 grams per kilogram of body. This proportion in the case of a man weighing 65 kilogrammes would be nearly 250 grams, whilst the quantity required to produce perfect antiseptis in the intestinal canal is estimated at only 2.5 grams daily; even when injected in the form of a 1 per cent. solution in alcohol, glycerine and water, the toxic dose was found to be 0.40 gram. per kilogram of

weight, or equal to 26 grams for a man weighing 65 kilograms. If, therefore, the full dose to procure antiseptis of the intestinal canal were absorbed from the starch, it would only amount to one-tenth of a poisonous dose, and such absorption is very unlikely owing to the sparing solubility of the drug.

Cocaine has been the subject of several careful investigations, which have thrown considerable light upon its possible purity or otherwise. There is now no doubt that cocaine exists in the leaves in company with other bases. One of these named, *hygrine* is a fluorescent body, and is therefore easily recognised; another, named *cocamine* by its discoverer, Dr. Hesse has as yet been found only in the small-leaved or Peruvian coca. Another named *cocaidine*, by the same chemist, has been detected in the broad-leaved or Bolivian coca. This base is amorphous, has a very bitter taste, causes a very transient sensation of numbness, and does not appear to irritate the eye. None of these bodies have been proved to possess anæsthetic properties, and until such is the case, should be removed from the cocaine used in medicine. As a test of the absence of amorphous alkaloid, the cocaine should be free from any marked odour, and the solution of hydrochlorate, when liquid ammonia is added to it, should not produce a milky, but should give rise to a precipitate of minute crystals from a clear liquid.

Saccharin has formed the subject of some experiments made by Mr. E. J. Millard, with the view of determining whether it possesses an anti-fermentive property, if added to the more commonly employed ferments. In these experiments a 0.2 per cent. solution of saccharin was used. In the case of pepsin it was found to possess very little retarding action, and the same was the case with pancreatin with relation to its action on casein, but saccharin interfered materially with the amylolytic property of pancreatin, ten times the amount of the latter being required to produce the ordinary result; but it was found that if sodium carbonate were present in sufficient amount to neutralise the saccharin, no appreciable retardation took place. In the case of diastase, saccharin was found to exercise a retarding action, so that twice the usual amount of diastase was required to effect the same amount of starch; when however the saccharin was neutralised, a slight increase of diastatic power was observed. On papain the retarding effect was very slight. With respect to its action upon moist fibrin, Professor Salkowsky had previously shown that the antiseptic effects of saccharin are greatly lessened when it is neutralised, so that saccharin, like benzoic and salicylic acids, is much more active than its salts.

Stenocarpine (as suggested on p. 514) proves on examination to be a fictitious alkaloid like hopeine, analyses having shown that the solution sold as a 2 per cent. solution of stenocarpine or gleditschine contains cocaine, atropine, and a little salicylic acid. (*Therap. Gazette*, p. 756). An alkaloid named gleditschine does, however, appear to have been obtained from *Gleditschia triacanthos* by Dr. B. H. Lautenbach in 1878.

Dr. Randall Hutchinson (*Therap. Gazette*, p. 731) furnishes a contribution from the Laboratory of Experimental Therapeutics at the Pennsylvania University, on the physiological action of *Cimicifuga racemosa*. He arrives at the conclusion that when full therapeutic doses of the drug are taken, it produces a sense of fullness of the head, giddiness, intense frontal headache, dimness of vision, and vertigo, with a feeling of general malaise and aching of the limbs. A reduction of the pulse is a constant symptom after the administration of the drug. In some instances it causes nausea and vomiting, looseness of the bowels, and occasionally purging.

Menthylal forms the subject of some valuable notes in the *Medical Press* (November 2nd, p. 417) by Dr. B. W. Richardson. He considered that its action lies between ethylic alcohol, and ethylic ether. It reduces arterial tension, and by local action excites glandular activity. It does not induce profound sleep unless an excessive dose is given. A fatal dose kills by completely relaxing the muscular fibres of the heart, leaving the heart distended with blood, and the vascular organs intensely injected. It tends to maintain the fluidity of the blood, and may consequently be of service in combination with ammonia. It does not reduce the animal temperature so much as common alcohol. He

believes that it will form a safe and effective anæsthetic mixture in combination with ether. It can be administered either by inhalation, by subcutaneous injection, or by the mouth in aqueous solution. It is quickly eliminated, leaves no serious effects, and does not cause either vomiting or stomachic disturbance. It combines well with ether, amyl nitrite, and many other remedies, and equalises their action by reason of its own solubility. Its chief value appears to be as an hypnotic and anti-spasmodic.

Periscope.

I.—GLEANINGS IN MEDICINE.

By W. B. KESTEVEN, M.D.

Labio-Glosso-Laryngeal Paralysis, Occurring Suddenly, from Obliteration of Bulbar Arteries. By M. Richardière (*Journal de Médecine de Paris*, Decembre 4th, 1887).—Laval, æt. forty-five years, was admitted on the 20th of May, 1883, under M. Bucquoi, into the Cochin Hospital, on account of a series of nervous symptoms. The patient had suffered from a similar attack in the previous year for about six weeks, after which time the symptoms gradually passed off. Laval was of a strong constitution without trace of any marked diathesis. At the time of admission into the hospital she was in a dull obtuse condition and seemed to have lost her memory. This state came on suddenly four days previously. Articulation was embarrassed and the mouth was closed with difficulty. Intelligence was perfect; she answered all questions correctly, and had followed her occupation up to the moment of the attack. At the time of her admission she exhibited the complete symptoms of glosso-labio-laryngeal paralysis. The eyes were wide open and movable in all directions, but the eye-lids could not be completely closed. The mouth was open, and from the paralysed state of the orbicularis allowed the saliva to dribble. The tongue was equally paralysed and could not be protruded. The *velum palati* was immovable. Deglutition became difficult, and liquids were rejected through the nostrils. Speech was nasal; articulation difficult and confused. Movements of the limbs were unimpaired. Sensibility was normal. The radial arteries and the aorta presented some indications that they were atheromatous. There could be no doubt that this was a case of labio-glosso-pharyngeal paralysis, the only question was as to the history of its origin. The suddenness of the attack excluded the softening of the bulbar centres as described by Duchesne, the complete evolution of which occupies months, sometimes years, in the successive impairment of power in the muscles. The state of the large vessels indicated the possibility of acute softening from the same condition in the bulbar arteries, of which examples were recorded by Hallopeau. In the present case the obliteration of the bulbar arteries could only have been momentary, as the paralysis had disappeared in the course of a few weeks. The tongue first, then the lips, and *velum palati* recovered their motor power. The paralysis of the *orbicularis* of the eye was latest. In two months from admission the patient left the hospital. It is to be noticed that in this case there was an absence of any affection of the larynx, and non-participation of the vagus. So sudden an attack occurring in full health, together with the rapidity of course of the paralytic symptoms leave only the conclusion that hæmorrhage in the bulb must have been the cause.

A New Process for the Medico-legal Examination of Blood Stains. By M. Ferry de la Bellone (d'Apt) (*Progrès Médical*, Novembre 26th, 1887).—This process aims at uniting in a small volume as possible the largest amount of the blood elements. If the stain be upon linen, fibres are to be teased out with a needle and placed in a tube on a one-thousandth solution of chloride of sodium. The fluid will soon become of a reddish brown colour; this liquid then examined by the spectro-scope will present the characteristic lines of hæmoglobin. For the examination of the blood globules one or two drops of a saturated solution of chloral are to be added to the fluid, when a rose-coloured precipitate will be obtained, the superincumbent fluid is to be recovered with a pipette—a drop of the precipitate is to be exposed on a thin plate over the flame of a spirit lamp. A clear liquid will be separated and may be taken up by blotting paper. The pellicle of coagulum that is left should be coloured with fuchsin, then washed with water. A drop of diluted acetic acid will render the preparation transparent, and the globules will be apparent of a bright red colour. Crystals of hæmatine may be seen if, before adding chloral to the precipitate above-mentioned, dried; a few drops of acetic acid be added, while warm, the crystals will appear as it cools.

An Artificial Serum for the Dilution of the Blood in the Enumeration of the Globules (*Le Progrès Médical*, Novembre 26th, 1887).—M. Mayet, at the sitting of the Academy of Sciences, Paris, on November 14th, gave the following formula:—Distilled water, 100 parts; anhydrous neutral phosphate of sodium, two parts; cane sugar to raise the density of the liquid to 1.085. In this artificial serum the globules of the blood preserve their normal form.

The Fauna of the Grave (*Le Progrès Médical*, Nov. 19, 1887).—M. Magnin has shown the correctness of the popular belief in "worms in the tomb." Naturalists have supposed that bodies buried six or seven feet underground, in closed coffins, must be decomposed by physico-chemical agencies. The exhumations effected by M. Brouardel have shown that the non-scientific opinion is correct, and that dead bodies are devoured by insects at that depth as nearly entirely as in the open-air. The "worms" are the larvæ of insects, some of which were deposited on the bodies before interment, whilst others, derived from the surrounding earth, find their way through fissures in or between the planks of the coffins; the ova having been deposited on the surface of the earth, the larvæ have been attracted to penetrate the soil by the emanations from the body. Certain coleoptera attach themselves to fat, others to thin bodies. M. Magnin infers the age of the interment from the species of insects in the coffins.

Epilepsy of Aural Origin (*Le Progrès Médical*, Nov. 26, 1887).—(*Académie des Sciences*, Nov. 14, 1887).—M. Boucheron pointed out the occurrence of an epilepsy of auricular origin, presenting all the diverse forms of *grand mal*, *petit mal*, and *hystero-epilepsy*. The starting point is an excitation of the auditory nerve, producing a disturbing influence upon the medulla oblongata and brain, in the same manner as the epilepsy described by Brown-Sequard, from irritation of the fifth nerve. One of the most interesting forms of epilepsy is deafness from obstruction of the Eustachian tube. An examination, therefore, of the ear should be instituted at the commencement of symptomatic nervous affections.

On the Twofold Cerebral Action, in Voluntary Movements (*Le Progrès Médical*, Nov. 19, 1887).—At the sitting of the *Académie des Sciences*, Paris, on Nov. 7th, M. Brown-Sequard discussed the grounds of the generally received teaching with regard to the above question. If, urged M. Brown-Sequard, the prevalent notions were correct; if each half of the brain influenced exclusively the opposite half of the body, then every irritation on one side of the brain from the excito-motor zone to the decussation of the pyramids, should determine only movements on the opposite side of the body. M. Brown-Sequard, however, holds (1) that galvanic or mechanical irritation of the internal capsule causes sometimes movements of one or two limbs on the same side; (2) that irritation of the cerebral peduncle, especially in its lower portion, produces more frequently movements on the same than on the opposite side; (3) that irritation of the pons varolii, in its motor portion produces movements on the same side in three-fourths of the cases; (4) that irritation of the anterior pyramids produces movements of the same side nine times out of ten. On the other hand, M. Brown-Sequard states that if after having raised the transverse layer of the pons varolii, the lower surface of the incised portion be stimulated, the effects are the same as in excitement of the upper surface. The movements, indeed, by irritation at the base of the brain, are reflex, and not simply the effects of irritation of voluntary nerve-fibres. If, adds M. Brown-Sequard, the current doctrine were correct, transverse section of one-half of the base of the brain, on the right side for instance, should render impossible the alleged action of the motor centres in the cortex on the right, and cross action should be lost, whereas after this section it is often found that the limbs on the left side manifest more energetic movement than before the division. M. Brown-Sequard affirms that the phenomena of paralysis in man do not support the current theory. He rejects entirely the opinion that the right brain is the source of motor power to the members of the left side, and the left brain to those of the right side.

The Treatment of Phthisis by Inhalations of Hydro-fluoric Acid (*Journal de Médecine de Paris*, Novembre, 29th, 1887).—A report upon a communication to the "Academy of Medicine," upon the above subject, by MM. Seiler and Garein, was read by M. Herard. M. Garcin had submitted to the consideration of the Academy a work founded upon a hundred observations. M. Herard had visited many of these cases, and had investigated for himself the results. He concludes with the statement that hydro-fluoric acid possesses an undoubted therapeutic action when phthisis is not far advanced. Its use, M. Herard adds, is free from inconvenience, is easy of application, and admits of being conjoined with other medicinal agents, and especially with hygienic treatment.

On the Uses of Antipyrine (*Journal de Médecine de Paris*, Novembre 27th, 1887).—Dr. E. de Pradel writes to say that he has

given this medicine in many instances, but that its effects do not come up to the vaunted standard of utility, and that he has ceased to prescribe it except in cases of migraine and neuralgia. If, Dr. de Pradel observes, there be any affection in which antipyrine might be expected to be of service, it is acute articular rheumatism; but in the cases in which he had used it he obtained no beneficial results, and cannot compare, in therapeutic power, with salicylate of soda. In two cases of typhoid fever, its administration was followed by such profuse perspiration, and a comatose condition, that it was withdrawn. "Why relinquish," Dr. de Pradel adds, "our old antithermic or analgesic agents—quinine, salicylic acid, morphia, etc.—for a new and uncertain remedy?"

On the Poisonous Action of Alkaline Chlorates (*Centralblatt für Kinderheilkunde*, November 26th, 1887).—Although as far back as 1885 a fatal case of poisoning by chlorate of potash was recorded, and although in 1860 Jacobi had pointed out that large doses of the alkaline chlorates are dangerous, the opinion that these salts are innocuous has prevailed. In the year 1879 the fatal action of the chlorates was shown by experiments upon animals. This led to a reconsideration of the free use of these remedies in diphtheritic affections. Since then, year after year, occasionally fatalities have been announced. Several instances of the fatal effects of their careless and too profuse employments as gargles, in which large quantities have been swallowed. The principal symptoms have been jaundice, suppression of urine, cramps, coma, followed by death in varying periods. These salts have also been employed for suicidal purposes, also for the induction of miscarriage. On *post-mortem* examination, the kidneys have been found of a dark chocolate colour, loaded with dark blood, the urinary tubes filled with dark cylinders and globules, the urine strongly alkaline, of a dark colour from excess of hæmoglobin and biliary matters. The following case may be taken as an example of the poisonous effects of the chlorates. A—, aged 57 years, suffering from severe acute angina, was ordered a gargle of a three per cent. solution of chlorate of potash every half-hour. The patient was cautioned against swallowing it, but in the course of thirty-six hours he had used fifty grammes of the gargle. Of this a large portion had been swallowed (May 7th). On the following day he exhibited extreme prostration, was enervated, and had a dull, heavy expression of countenance. The face and conjunctiva were deeply coloured with jaundice; the lips and ears presented a greenish-blue discoloration. Vomiting was urgent, sleeplessness and restlessness were observed. The temperature was 96°F.; the pulse soft and small. Great thirst. Suppression of urine; with great effort about six drachms were voided, of a dark brown with greenish shade. In the sediment were large flocculi and coagula, consisting of glittering scales and hyaline cylinders, only a small proportion of albumen. Profuse sweating was induced by woollen wrappings. The suppression of urine continued, and on the 14th day of the same month the patient died suddenly. On *post-mortem* examination the kidneys were found enlarged beyond their normal size, externally they were of a rich brown colour. The pyramids had a dark blackish-brown colour. The tubes were found to be loaded with cylindrical casts and blood globules.

Experimental Researches upon Delphinium Staphisagria, and Delphinine. By Dr. Gauthier, Naples (*Journal de Médecine de Paris*, Novembre 20th, 1887).—Delphinine is an amorphous yellowish resinous powder, insoluble in water, soluble in alcohol, chloroform, and acidulated water. The maximum dose is from one to ten milligrammes in a day. Combined with vaseline, one part to five, it has been used externally as a pomade. Dr. Gauthier gives the following conclusions as to the physiological and toxicological effects:—Its action is primarily upon the medulla oblongata, and subsequently upon the sympathetic system. It produces, at first, functional excitement, then a gradual diminution of the functions, and a complete but evanescent abolition thereof. The analgesia may last for twenty-four hours. The action of delphinine upon sensibility constitutes its most important physiological, and upon this is based its therapeutical, employment. In poisonous doses it acts upon the locomotor system producing incoördination and ataxy, the contractility of the muscular fibres being maintained until the death of the animal. The action of delphinine is upon the heart and circulation, it at first accelerates the cardiac movements and causes irregularity therein. Then occurs a period of more regular action, finally the heart's action ceases in diastole. The modifications of blood tension consist in a temporary elevation followed by a more or less marked depression, accompanied by corresponding modifications of temperature. The effects of delphinine are extended to the respiratory functions by the production of spasmodic action of the abdominal and intercostal muscles, and of the diaphragm, consequent on the augmentation of carbonic acid in the blood. When the tetanic action is at its highest, the animal dies from asphyxia. Death occurs from arrest of the respiration. Vomiting and diarrhoea are caused by delphinine. Upon

the pupil its action on the cilio-spinal centre is seen in this production of myosis followed by mydriasis. In its elimination it augments the secretions. The treatment of poisoning by delphinine is indicated by its mode of causing death. Artificial respiration affords time for its elimination, and the action of other remedies, such as strychnia and atropine. The therapeutic action is exerted in neuralgia affections attended with augmentation of sensibility, such as neuralgia of the fifth nerve. Its preferable mode of use is by subcutaneous injection in doses of one milligramme repeated at intervals of two hours. The external application is useless on account of its non-absorption. [Dr. Gauthier's conclusions correspond closely to the observations of Dr. Launder Brunton—see *Text Book of Pharmacology*, 1887.]

Toxicity of Strychnine (*St. Louis Medical and Surgical Journal*, December, 1887). Choupe and Pinet, who have for some time past been experimenting with the view of determining the minimum of the lethal dose of strychnine administered hypodermically, announce to the Society of Biology of Paris, that they have determined it to be between 0.24 and 0.25 of a milligram (0.0037 grain) to each kilogram (2 lbs.) weight of the animal experimented upon. The kind of animal, its age, etc., seem to cut little or no figure in the general result. At this rate it would take a little over one-third of a grain of strychnine, administered hypodermically, to kill a man weighing 200 pounds.

Summer Diarrhoea (*St. Louis Medical and Surgical Journal*, September, 1887). Dr. Victor Vaughan, in the course of a paper in the *Maryland Medical Journal*, says on this subject—*The first thing to do is to stop the administration of milk in any form.* The ferment is present in the alimentary canal and giving the best milk would simply be supplying the germ with material for the poison. This no-milk-treatment is not by any means a new idea; but the reason for it has not hitherto been understood. Now that we know that a powerful poison is formed from the putrefaction of milk, the necessity for its exclusion must become apparent to all. The food used may consist of chicken and mutton broths, beef juice, and rice or barley water. With this list no difficulty will be experienced in giving the child sufficient nourishment.

II.—NOTES FROM FRANCE.

BY HASTINGS BURROUGHS.

At the Académie de Médecine Dr. Ernest Besnier made an important communication on the malady known as leprosy. For him this affection, instead of being now obsolete in Europe, is still frequently witnessed, especially in the South, and the origin might be ascribed to a special microbe, although it has not been fully determined how or in what degree the malady is transmitted, for the method of transmissibility varies much. In any case man is the only agent by which leprosy is transmitted. He carries it about with him wherever he goes, and no special climate can be incriminated. It is without doubt hereditary, but not to such an extent as might have been believed. Poverty and close huddling together was a very exciting cause; and thanks to sanitary laws, which are now the basis of medical science, the propagation of leprosy is no longer to be dreaded.

The lesions observed in those who are addicted to the consumption of morphia by injection or otherwise have been specially studied by Professor Ball in a case which he had to treat recently. A young woman entered the hospital in order to be delivered from the evil habit. She used to inject as much as thirty grains of morphia daily. She asked that the drug should be immediately suppressed; but in a day or two the collapse was so great that it had to be readministered, and gradually it was replaced by injections of sparteine. The treatment lasted two months, when she seemed to be perfectly cured. However, just as she was preparing to leave the hospital, she died suddenly. An autopsy was made, and the heart was found to be enlarged and fatty, the liver, kidneys, and spleen were in a similar condition; and in the hepatic organ a considerable amount of morphia was found.

In the *Révue de Médecine* Dr. Chauffard recommends a very simple but successful treatment of idiopathic jaundice which has been employed lately in Germany. It consists in enemata of cold water administered once a day. Nearly a quart might be used for young persons, whereas about twice that quantity should be given to adults. The water should be very cold, and retained as long as possible. He cited several cases in which he obtained the most satisfactory results from four to eight days of treatment. After the first two or three enemata the bile returns into the intestine and colours the fæces; the appetite returns, and the patient feels a *bien être*. The pruritus which is so often distressing also yields rapidly. The method of action would seem to be as follows: the extreme cold of the water produces a reflex action on the intestine, which extends to the muscular coats of the biliary ducts, producing their contraction and consequently the expulsion of

the obstruction. It will be well understood that this treatment only applies to the catarrhal form of icterus.

Dr. Fraipont, in an article published in the *Annales de la Société Médicale de Liège*, calls to mind the constant use of iodoform gauze plugs in the treatment of bleeding cavities, and recommends it in obstetrics. He has used it for plugging the uterus in cases of passive hæmorrhage, and has been much pleased with the result. Of course the uterus must be considerably dilated, but such a condition is generally found after abortion, or those surgical operations such as excision of polypus, enucleation of fibroma. The plug might be left *in situ* twenty-four hours or longer, and renewed each time.

Les Archives de Médecine contains a remarkable case of multiplied gangrenous cutaneous patches. A girl of twenty-one, having received a slight wound on the left thumb, perceived a gangrenous patch close to the sore. Other patches soon were discovered on the arm, shoulder, and even on the face. Slight fever accompanied the apparition of each patch; the skin reddened, and soon became covered with a grey spot with yellow points. The slough became detached speedily, and the wound rapidly healed. The treatment consisted in application of a sublimate solution (one per cent).

At the Société de Chirurgie a long debate ensued on the treatment of perforation of the intestines produced by external wounds. Two opinions had their partisans; one was that when the penetration was fully diagnosed the abdomen should be opened, the intestine sought for, and the wound closed to prevent fecal matter from escaping into the peritoneum, while the other was in favour of systematic abstention. M. Reclus said he would be inclined to the latter, or conservative treatment, although he would not deny that sometimes the most heroic method may be called for. The diagnosis of traumatic perforation is very difficult. The tissues of the abdominal wall divided by the instrument close up again, and it is impossible, or nearly so, to say what damage has been done to the internal viscera. Sometimes it has been observed that the knife, or ball, just struck between the folds and thus left the intestines untouched. Such cases have been observed in the proportion of four per cent. As to the immediate signs of perforation, they were obscure and often wanting, and generally it is only when peritonitis supervenes that the fact is discovered. In penetrating wounds of the stomach hæmatemesis may be observed, whereas hæmorrhage from the intestines through the rectum is not often witnessed *au début*. In any case penetration is not necessarily fatal when treated without operation. Statistics have shown that although great damage may be done the patient recovers, and the reason may be found in the fact that stercoral matter is not always present in the intestine, as frequently the person has not eaten for several hours. In conclusion M. Reclus indicated the line of treatment he would follow in penetrating wounds of the intestine. The patient is placed in a position of absolute repose, the external wound washed by an antiseptic solution and hermetically sealed by iodoformised collodion; the abdomen is covered with a good layer of cotton and firmly bandaged with a flannel roller, as after ovariectomy. Subcutaneous injections of a third of a grain of morphia are given, and feed the patient on exceedingly small quantities of milk, beef tea, or wine; thirst will be combated by ice in the mouth. If in spite of all peritonitis is observed laparotomy remains the only resource.

Treatment of gastralgia:

Ext. of coca.....	3 iiss.
Syrup of orange.....	3 i.
Water	3 v.

A tablespoonful every hour.

III.—NOTES FROM RUSSIAN JOURNALS.

BY VALERIUS IDELSON, M.D., BERNE.

On Concentration of Scarlatinal Virus.—At a meeting of the local Medical Society, Dr. J. J. Ostroïmoff, of Arkhangelsk, read an interesting paper (*Proceedings of the Arkhangelsk Medical Society for 1886*, vol. ii., 1887) on the etiology of scarlet fever, whose epidemics condescend to visit from time to time that lonely northern centre of (more or less) civilised life, in spite of all black—or even jet-black—frosts reigning over the vast coasts of the White Sea. The main point to which the author draws attention is the influence produced by “concentration” of the scarlatinal contagion on the duration of incubation on one side, and on the intensity of morbid symptoms on the other. Dr. Ostroïmoff lays down the following propositions:—
1. The degree of “concentration” of the scarlatinal virus shows a marked influence on the duration of period of incubation. 2. The length of the latter stands in a converse relation with the degree of “concentration” of the contagion—in other words, the stronger the “concentration” is (or rather, the larger the amount of the virus is which finds its way into the patient's system), the shorter the period of

incubation becomes; and the more diluted the virus is, the more the period of incubation lengthens. 3. The same holds true in regard to the course taken by the disease. The more concentrated the virus (and, therefore, the shorter the period of incubation) is, the more severe course is taken by the attack of scarlatina; the more diluted the contagion is, the milder the form is which is assumed by the affection contracted. Therein the explanation of the fact should be sought that "in the beginning and termination of epidemics of scarlet fever almost rudimentary forms alone are observed." To quote some of the facts on which Dr. Ostroïmoff's assertions are based:—A lady with her only boy, aged three, visits a house where two children have died from a malignant form of scarlet fever a couple of days before, and attends the funeral service of three hours' duration. On the third day her boy falls ill with severe scarlatina, to die two days later. Several hours after his death the lady calls on a district police officer to speak about some formalities in connection with her deceased child's burial. On the seventh day after her visit the officer's only son, aged eight, develops all symptoms of a mild form of scarlet fever, the attack ending in recovery in about three weeks. Neither the lady's boy nor the officer's have been in contact with any other sources of the infection, except those mentioned above.

[The same subject has been touched also in an able paper of Dr. J. A. Kosmovsky in the *Proceedings of the Arkhangelsk Medical Society*, vol. i., 1885, p. 11.]

Cockroaches in Dropsy.—Dr. J. A. Snejko, of Kaluga, reports (*Proceedings of the Kaluga Medical Society*, part i., 1886, p. 5) a case of anasarca, in which he administered powdered cockroaches in the daily dose of $1\frac{1}{2}$ drachms. Having no idea of the nature of his "medicine," but being quite satisfied with its services, the patient took four additional teaspoonfuls of the powder daily. The diuretic treatment of the kind brought about a marked improvement. Notwithstanding the largish doses used, the drug did not produce any gastric disturbances, or any other unpleasant effects.

Meanwhile, Dr. V. E. Kritchevsky, of Kaluga, recently saw (*ibid.*) a case of general dropsy where powdered cockroaches, taken in the daily dose of three teaspoonfuls, gave rise to gastric disorders, without bringing any beneficial change in the patient's state. Cockroaches are an ancient anti-dropsical remedy of Russian peasants. Into the scientific medicine the drug was introduced (almost simultaneously with maylilies, adonis, and clay) by Professor S. P. Botkin, of St. Petersburg. Some physiological and clinical facts concerning the subject may be found in Drs. Bogomoloff's and Tchernysheff's works.—*Vide the London Medical Record*, June, 1884, p. 250.

Hydrops Adiposus or Chylosus.—In the *Meditsinskia Pribavlenia K' Morskoi Sbornik* (Medical Supplement to the Naval Review), February, 1887, p. 140, Dr. M. A. Lüklin, prospector to the Cronstadt Marine Hospital, contributes a case of a rather rare morbid form, described by some authors (Quincke, Klebs, Luecke, Friedreich, Boegehold, Winiwarer, Marcet, Ormerod, Curnow, Wilks) under the name of "Hydrops Adiposus or Chylosus" (and apparently noticed also by Rokitsansky, Oppolzer, Morton, Hoppe-Seyler, Marshall Hugues, Manson, Bergeret). Dr. Lüklin's case refers to a highly emaciated peasant woman, aged seventy, in whom simply "ascites" was diagnosed during life. At the *post-mortem* examination the peritoneal cavity was found to contain thirty fl. pounds of a sallow, turbid, watery liquid of alkaline reaction, while the (extremely contracted, almost entirely destroyed) great omentum, transverse colon, duodenum, pancreas, and pylorus, were studded and matted together with numerous scirrhous nodules. A portion of the ascitic fluid, after a day's standing, gave a reddish deposit, which under the microscope proved to consist of (a) shrunken red blood corpuscles, enclosed in a fine-meshed network of coagulated fibrin; (b) large round corpuscles, with a fine granular protoplasm, closely resembling the colostrum-spheres; and (c) scanty flat epithel-cells undergoing fatty degeneration. The fluid standing above the precipitate remained as turbid as before. It was then mixed with some ether, and left alone for two hours, by the end of which time there was found on the surface a thin, whitish, cream-like layer, consisting of fatty drops of varying sizes, and of margarine crystals in the shape of fine needles grouped in small bunches. Discussing the question from which source the fat could come forth, and be admixed to the peritoneal effusion in his case, Dr. Lüklin arrives at the admission that he had to deal with a case of "ascites chylosa"—that is, with the case of transudation of a stagnated chylus from the mesenteric and other abdominal lymphatic vessels, under the influence of a constant pressure produced by the tumours on the lumbar and celiac lymphatic plexus. Another theoretically possible source—a wholesale fatty degeneration of histological elements of the malignant new growth—is here excluded by the fact that the carcinomatous nodules were hard, and did not show any sign of disintegration. The subject under consideration possesses a real practical interest, since some authors (Boegehold,

etc.) are going even so far as to assert that an "adipose" character of any effusion (as established by aspiration) points to the presence of a malignant tumour (carcinoma or tubercle), and that, therefore, a puncture may supply us with an additional diagnostic sign of no small value.

Congenital Absence of the Penis.—In the *Vratch*, No. 24, 1887, p. 487, Dr. Vinogradoff, of Bolshië Berezniki, Simbirsk Government, records a rare case of a peasant boy of seven, who, when brought to the author on account of inguinal and scrotal intertrigo, was found to have no penis at all. The scrotum and testicles were quite normal. At the anatomic site of the root of the penis, at the upper end of the scrotal raphe, there was present a small urethral opening surrounded by a normal scrotal skin. He passed urine in a good jet, but by the termination of each micturition some urine streamed down along the scrotum (hence the skin-disease in the boy). Through the integuments there could be felt the cavernous portion of the penis, measuring two or three centimetres downwards from the urethral slit.

On the Physiological and Therapeutical Action of Trimethylcarbinol.—Trimethylcarbinol is a tertiary pseudo-butyl alcohol (prepared by Professor Bittleroff, of St. Petersburg, in 1864). It is a thick, oily liquid substance, possessing a pleasant camphor-like odour, and easily soluble in water in all proportions. In 1867 Professor A. J. Danilevsky, of Kharkov, has carried out first physiological experiments with the substance on frogs and men, and has discovered that "trimethylcarbinol diminishes irritability of nerve-cells of the mental centres, without causing any initial excitation of the parts." In 1885 Drs. H. Thierfelder and von Mering also stated that the drug manifested a hypnotic influence on rabbits. Quite recently, at the suggestion of Professor Danilevsky, Dr. B. M. Shapiroff (*Vratch*, No. 17, 1887, p. 359) has undertaken a long course of experiments on frogs, rabbits, dogs, and men, in order to more minutely examine the biological effects of trimethylcarbinol and thus to prepare a more or less reliable ground for its use as a therapeutic agent. The conclusions reached by Dr. Shapiroff may be summed up as follows:—1. *In small doses* (in a hypodermic dose of from 0.01 to 0.05 gramme in frogs, in an intravenous dose of 0.05 to 0.5 in rabbits, and 0.5 to 1.0 gramme in dogs) trimethylcarbinol (a) lowers the irritability of the brain in frogs; (b) lowers the blood-pressure through paralysing the vaso-motor centres in rabbits and dogs; (c) does not show any influence on the pneumogastric nerves. 2. *In middle doses* (in a hypodermic dose of 0.1 gramme in frogs, and in the internal dose amounting to 0.1 per cent. of the body weight in rabbits and dogs) the drug (a) produces an inhibitory action on the brain, causing a transitory general lassitude and immobility in frogs, and a short excitement ("alcoholic narcosis"), followed by general languor, drowsiness, staggering gait, etc., in rabbits and dogs; (b) does not change the cardiac, respiratory, or reflex actions. 3. *In large doses* (in a hypodermic dose of 0.2 in frogs, in the internal one amounting to 0.2 per cent. of the body weight in rabbits) it (a) suppresses the cerebral action, causing a temporary complete paralysis of voluntary movements in frogs and rabbits, and also deep sopor in the latter; (b) in rabbits and dogs, when introduced into a vein or the stomach in a half a gramme or a larger dose, the drug produces a very marked decrease of excitability of the cerebral cortical substance; (c) in frogs, the minimal lethal dose is 0.5 gramme, in rabbits it begins with three per cent. of the animal's weight. 4. *In man* (about 200 observations on patients suffering from various nervous disorders), (a) when given internally, in the dose of five to fifteen drops two or three times daily, trimethylcarbinol lowers mental irritability, and generally alleviates a morbidly-increased nervous excitability (in cases of neuroses, hyperæsthesia, neuralgic headaches, etc.); (b) it does not give rise to any initial excitement. 5. *General corollaries.* (a) Trimethylcarbinol belongs, therefore, to the group of sedative nervine (mainly cerebral) drugs; (b) it may prove of service (i.) in functional (non-organic) cases of mental (cerebral) excitability; (ii.) in cerebral neurasthenias associated with mental excitement; (iii.) in delirium tremens; and (iv.) possibly, in certain forms of epilepsy.

Almost simultaneously with Dr. Shapiroff, Dr. Ekaterina O. Shimova-Simanovskaia, one of the house physicians to Professor S. P. Botkin's clinic in St. Petersburg, has published (*Ejenedelnaia Klinicheskaja Gazeta*, No. 11, 1887, p. 193) a preliminary note on her own experiments bearing on the same subject. The outcome may be condensed thus:—1. *Experiments on dogs.* 1. When given internally, trimethylcarbinol sometimes causes a profuse salivation and increases appetite. In the dose of 0.58 to 1.96 gramme pro 1 kilogramme of the animal's weight, it gives rise to a fleeting excitement with a marked weakness of limbs (especially of the hind ones), which is soon followed by drowsiness and actual sleep. The latter in the beginning is interrupted, but subsequently becomes deeper and quiet, and lasts from one to six hours. 2. When injected under the skin, the drug brings about the same phenomena, but somewhat more rapidly. During sleep (a) the respiration remains quite

equable, but becomes somewhat deeper and slower; (b) the cardiac action is, as a rule, also retarded; but (c) the arterial tension is not altered (at least, when the dose does not surpass 0.804 gramme pro 1 kilogramme); (d) the cutaneous sensibility decreases; (e) as a rule, the temperature remains unaltered, but sometimes it slightly ($0.2^{\circ}\text{C}.$) sinks. When injected into a vein, the drug produces a considerable though transitory fall of the blood pressure with a simultaneous retardation of the pulse—e.g., after the dose of 1.96 gramme pro 1 kilogramme, the pressure gradually returns to the normal level in about two hours. 4. Only in one "very nervous" dog, which had been occasionally suffering from "twitchings" when asleep, the drug induced fairly strong general clonic convulsions (also during the animal's sleep). In the remaining animals experimented upon (the number of which is not stated by the writer), the use of trimethylcarbinol was not accompanied by any untoward accessory phenomena. The maximal internal dose used by Dr. Shūmova was 1.96 gramme pro 1 kilogramme; ditto hypodermic = 1.0; ditto intravenous = 1.2. II.—*Experiments on frogs.* The drug was invariably injected into the femoral sac. 1. In small doses it induces only a fairly strong excitement. 2. In large doses (0.4 gramme) trimethylcarbinol gives rise (after a very short period of excitement, or sometimes without it) to a rapid prostration, with a marked diminution of sensibility, extreme retardation of the cardiac and respiratory organs. The animal remains entirely motionless, and to all appearance lifeless, for about twelve hours, and then gradually but completely recovers. III.—*Experiments on men.* Only two cases are adduced in detail, in which the drug was given as a hypnotic for relieving obstinate sleeplessness. In both of the patients (men) a dose varying from ten to twenty drops invariably produced, within thirty minutes, a quiet, sound, and refreshing sleep of about nine hours' duration. No unpleasant accessory effects were ever observed.

In the *Vratch*, No. 19, 19, 1887, p. 388, Dr. B. M. Shapiroff states that he has recently studied also (in Professor F. V. Ovsiannikoff's laboratory in St. Petersburg) the biological action of another tertiary alcohol, of dimethylcarbinol (which is the tertiary amyl-alcohol obtained by treating zinc-methyl with chloride of propionyl. It is a limpid oily fluid, possessing a pungent odour). The writer has arrived at the following results:—1. When introduced in the dose of 0.001 to 0.005 gramme under the skin in frogs, the drug gives rise to the same phenomena as produced by much larger doses of trimethylcarbinol. The initial period of excitement is either very short or absent altogether. 2. It acts mainly and before all on the cerebral hemispheres, whose action is inhibited and paralysed by the drug; later on, the latter paralyses also the spinal cord, as is shown by the arrest of the lymphatic hearts, the motor centres for which are situated in the cord, as Veliky's investigations have established beyond any doubt. 3. Dimethylcarbinol considerably lowers the arterial tension through paralysing the vasomotor centres. 4. It does not exert any direct influence upon the cardiac muscle. 5. But it acts on the body temperature, considerably lowering it, as some experiments on rabbits have shown. 6. In general, the qualitative biological action of dimethylcarbinol is identical with that of trimethylcarbinol, but the former acts more powerfully and more swiftly than the latter.

To judge from all experimental data published up to the present, the following physiological proposition seems to be justified:—While the chemical group of primary alcohols possesses a stimulant action on the animal system, the group of tertiary alcohols, on the contrary, belongs, as a whole, essentially to the category of inhibitory or sedative agents.

IV.—EXTRACTS FROM SPANISH MEDICAL JOURNALS.

TRANSLATED BY DR. G. CADOGAN MASTERMAN.

Enfermedad de los Buzos (Diver's Paralysis). By Dr. D. Rosendo Pi, Barcelona (*Revista de Ciencias Médicas—Continued from page 571, December, 1887*).—*Phenomena due to Increase of Pressure.*—The first of these is severe pain in the ears, with rumbling and explosive noises, caused by the driving inwards of the tympanum, which occasionally leads to its rupture. The remedy is to equalise the pressure by means of the Eustachian tube, and the diver tries to do this by forced deglutition, which opens its pharyngeal extremity, or when one ear alone suffers, by pressing the corresponding nostril against the valve which projects within the helmet and then breathing heavily. Severe pain is often referred also to the frontal sinuses and the jaws, with a singularly pungent sensation within the nostrils, often followed by profuse epistaxis; and one of the minor troubles is a persistently bitter taste in the mouth and severe headache. All these, however, generally disappear as the pressure within and without the helmet becomes equalised. The sensation of insufferable heat of which the workmen in the Argenteuil cassons complained so much is not felt by the diver, although his body

is generally bathed in profuse perspiration, for the water is usually cold enough to cool the compressed air effectually, in fact, the hands often ache intensely from the cold, and the condensation of the man's breath in the casque greatly interferes with clear vision. They wash the glasses by sucking water through the front valve and spitting it over them from the lips. Another trouble is the excessive secretion of urine, for, although the skin is acting so profusely, it is of course drowned in its own secretion, and the compressed air is so saturated with moisture that the lungs can get rid of none of it, and, therefore, triple duty is thrown on the kidneys.

As soon as the men at the pump have got the right pressure these difficulties disappear, and the diver seems to labour with more energy than at the surface so long as it does not exceed that of three atmospheres, but when the compression is between three and four or greater still an unconquerable desire to sleep often steals over him in a short time, and would soon end in fatal stupor. Therefore, when the diver is working in very deep water he signals frequently with the cord at his waist, and if these jerks cease his companions haul him up with all speed; consciousness often returns during the ascent, or at once when the front disc is unscrewed. At great depths, too, a feeling of suffocation in spite of abundant air is generally experienced, the act of inspiration is of course extremely laborious under so heavy a load and makes every other movement at the same time excessively fatiguing. Another result is hæmoptysis, the interior of the helmet is often bespattered with blood; at the same time coughing is rare and all sense of bronchial catarrh disappears when a moderate depth has been reached; and in spite of the excessive renal secretion thirst is never felt, but, as a compensation, there is much hunger, a quarter of an hour at a fair depth gives a prodigious appetite; and there is another compensation: it is most difficult to take a deep breath from the weight on the chest, but then, the oxygen being so compressed, very slight thoracic movements are necessary to carry on respiration.

Phenomena due to Decreased Pressure.—In returning to the surface all feeling of respiratory oppression rapidly disappears, but there is often troublesome coughing and sneezing, and very frequently bleeding from the nose. Noise and pain in the ears also, from the tympanum being driven outwards, but this quickly passes off as air can escape much more easily through the Eustachian tubes than it can enter them. The same vascular congestion which leads to epistaxis causes occasionally extensive ecchymoses under the skin, that of the abdomen looking as if it had been bruised. The skin, too, sometimes feels dry and scorchingly hot, and this is a serious matter for it is often the first symptom of grave internal mischief. Unbearable pruritus troubles others as soon as the helmet is removed, and severe neuralgic pains are common. M. Rameaux considers that most of the effects experienced on ascending are due to the sudden extrication of gases which had been absorbed under pressure by the blood, and which, according to Dalton's law, would be released effervescingly when that pressure was reduced in the vessels. This has been confirmed by some experiments of M. Bert's on animals; but the latter points out that although true in theory it is small in actuality, the imperfect respiration admitting a proportionately smaller quantity of air into the circulation; and all these effects are generally but transitory. The graver have now to be considered: one is an intense, expansive headache, the pain most excruciating, it feels as if the skull were breaking in pieces, and is sometimes accompanied by symptoms of compression of the brain—difficult articulation, distortion of the mouth, and so on—coming on shortly after the helmet has been removed, but generally passing off as the cerebral circulation recovers itself in about an hour's time, not always, however, ending so simply. But it is the analogous condition of the spinal cord which leads to the most serious and permanent mischief, and in which the danger of too rapidly decreasing the pressure on the surface of the body is most disastrously exhibited. The pathognomonic symptom is an extraordinary pallor and coldness of the surface, the face of the diver when the front disc is unscrewed before taking off the helmet exactly resembling that of a corpse to the eye and touch, and when this is well-marked there can be no doubt as to the gravity of the case. As an example: N. X—, twenty-six years of age, robust and healthy, made a descent in twenty-eight fathoms (four atmospheres) and remained under water for eight minutes, and then returned to the surface feeling nothing unusual, but on exposing his face its aspect at once alarmed the crew who, hastily removing the diver's dress, laid him on a mattress and subjected him to vigorous massage, which is the only treatment they employ in these cases. The integument was cold and bloodless, but he only complained of pain between the scapulae. Respiration got rapidly weaker with rhonchus at each inspiration, all surface sensibility was lost and the face became livid, and the breathing more embarrassed and slower, then general paralysis set in. The rubbing and kneading were, however, continued between three or four hours, when the patient opened his eyes

and seemed to be breathing more freely, this improvement was transitory and he died five hours after his submersion.

Case 2.—J. F—, of the same age as the last, and as healthy as one could be, went down in a depth of twenty-five fathoms (3.6 atmospheres) and came up complaining of pain in one knee. However he shortly descended again and then felt acute pain in his arms; he was very unwilling to try a third time, but his companions seem to have chaffed him with being afraid, and he once more went over the side. He did not stop down so long as usual and was very anxious to get out of the dress, saying it suffocated him, and almost immediately became insensible. He was rubbed for two hours and then recovered consciousness, complaining of aching all over his body. Dr. Pi applied elastic bandages to the upper part of the thighs, which were removed a few hours afterwards at the patient's request, and paraplegia immediately set in, with paralysis of the bladder. This gradually and spontaneously passed off, and at the end of six weeks the man was able to walk, but with persistent numbness and weakness of the right leg.

Case 3.—S. M— was twenty-five years old when he took part in an expedition to the island of Mallorca, in one descent he remained half an hour under water at a depth of twenty-five fathoms, came up and got out of the dress apparently unaffected. But shortly afterwards he felt a pricking pain in the right loin with such weakness in the legs that he was obliged to remain seated, but the bladder was unaffected and in four or five days he felt no more of it. Six years afterwards he was again collecting coral at the same depth and came up in twenty-eight minutes, and in four or five more, just as he had been stripped, the same pain attacked him and was followed by complete paraplegia involving the bladder. In a few hours the pain left him, and was succeeded by dyspnoea which threatened to end in suffocation; this passed off, however, after the chest had been rubbed for some time, and the paralysis also in about forty days, but he never thoroughly recovered the use of his lower extremities.

Case 4.—J. C—, of lymphatic temperament, and aged twenty-six years, was diving for coral off the coast of Bona, on the bank of the Cala Traverse, at a depth of thirty fathoms (4.3 atmospheres). In one of the descents he remained but two and a half minutes at the bottom, and quickly re-ascended. When the front lens was unscrewed the crew noticed a strange alteration in his face, which led them to strip him immediately, to his great annoyance and surprise, for he persisted in saying that there was nothing the matter with him. However, he fainted as soon as he stepped out of the dress, and remained insensible for nearly an hour. He then recovered consciousness, stammered a few words to the effect that he was all right, and lay down in the prow of the boat, when some of the crew commenced rubbing his limbs to avert, if possible, the dreaded paralysis; but in a few minutes pungent pain commenced in the legs, then in the arms, with rapidly increasing dyspnoea, and threatened suffocation. He complained, also, of epigastric pain, but of none in the spine. The massage and friction was kept up for twenty four hours, the crew taking turns at the work, and only then desisting because they had rubbed nearly all the skin off his body. He had temporarily recovered consciousness several times during this extraordinary procedure, and complained of the pain it gave him, and then relapsed into complete insensibility. But his condition getting worse, it was decided to put him in a cot and carry him ashore, and eventually to Bona, a distance of nearly twenty-two miles (thirty-five kilometres), but the poor fellow, as might have been expected, died before they had traversed half that distance.

Case 5.—N. C—, of robust build, twenty-nine years of age, went down to a depth of thirty-nine fathoms (5.6 atmos.), and remained three minutes; when he came to the surface he complained indistinctly of severe pain in the arm and right leg, kept twisting his neck about, and then became insensible. After two hours of the usual rubbing, he apparently came to himself for a moment, shouted loudly to a boy, and then relapsed into unconsciousness. Massage was redoubled, and continued for half an hour afterwards, when he again became sensible, but with complete paraplegia involving the bladder. In three weeks time this cleared off, leaving him, however, with permanent weakening in the lower extremities.

In the sixth case, after an immersion of only eight minutes, severe pain was felt in the calves of the legs, then in the thigh, and speedily followed by complete paraplegia, which passed off, however, after a few days rest in bed.

Case 7.—F. T—, a strong healthy fellow of thirty-six years of age, in one of his descents entered a cleft in the rocks, which led into an immense submarine cavern, the floor of which was at a depth of 186 feet below the surface (4.4 atmos.) He was groping within it for six minutes, then returned to the sea and ascended. He complained at once of

severe pain in the left arm, which soon extended to the chest and the spinal column, with the usual sense of impending suffocation, and was followed by insensibility with general paralysis. The crew had commenced rubbing him at once, and after six hours friction he recovered consciousness, but without being able to use his legs. The next day he was able to crawl about with the aid of a stick, but he was somewhat crippled for a few days longer.

Case 8.—M. B—, of thirty years, went down in twenty-two fathoms (3.1 atmos.), and remained quietly collecting for a quarter of an hour; when he came up he seemed to breathe with difficulty, lay down and fell asleep. When he awoke he found he could neither raise his left arm or leg, but there was not complete paralysis. He declined the usual friction, only asking to be covered up and left alone, and after another sound sleep was quite himself again.

Case 9.—S. T—, diving off the Sardinian coast, remained at a depth of twenty-three fathoms (3.3 atmos.) for half an hour. Directly he reached the deck he complained of severe abdominal pain, and then lost the use of his legs so suddenly that he would have fallen like a lump of lead if two of the crew had not caught him. He complained of no pain or difficulty in breathing, but underwent the usual severe regimen to no purpose. There was complete motor and sensory paraplegia, with atony of the bladder, necessitating catheterism for a month, and another elapsed before he was able to get about on crutches, with permanent paresis of the lower extremities.

Case 10.—C. V—, a healthy man, forty-four years of age, was searching for coral in one of the caverns which run under the Balearic Islands, at a depth of twenty-seven fathoms; he came up in about ten minutes, and was at once stripped, when his face became suddenly suffused and he lost consciousness, and when this passed off there was hemiplegia on the right side. A little later the usual dyspnoea set in, with severe pain in the loins. He was rubbed for six hours, when consciousness returned, but with inability to empty the bladder and to walk. Two days afterwards he came under the care of Dr. Pi, as the only case under his treatment. He found the patient in bed with his legs enveloped in bran poultices, and complaining of severe pain in the lumbar and lower dorsal vertebrae. On the inside of the left knee there was a severe burn from a can of boiling water having been accidentally upset over him, and which he had scarcely felt. There was complete motor paraplegia, but with some sensation left, pricking pain in the toes, and the urine was dribbling away from the distended bladder. Skin hot, abdomen tympanitic, and the tongue thickly furred. The doctor wanted to bleed him, but this was (happily) not permitted, so he prescribed tisanes and fifty grammes (rather over three ounces) of castor oil, and removed the poultices. The oil acted disastrously the next day, for there was complete paralysis of the *sphincter ani*, the urine was left to escape as before, and the distension of the abdomen was somewhat worse.

Two days later, September 1st, the pain had become more severe in the back, so a large plaster of *thapsia* (*Thapsia villosa*) was applied there and another three full ounces of castor oil administered. The next day one is prepared to learn that the patient was delirious, complained of difficulty in breathing, and that the pulse had gone up with a falling temperature (nothing is said about diet, but he was doubtlessly starved on broth and herb tea), the pain however had disappeared. By September 28th control had been regained over the bladder, and to a great extent power in the legs as well. On October 14th large bed-sores were noticed, and an interesting spinal reflex. On palpating the abdomen over the first lumbar vertebrae a wave of nerve-force seemed to pass to the feet, followed by violent trembling of the limbs. In the following month the man was able to get about on crutches, but hopelessly crippled to the present day. The dangerous nature of the work is shown in the following table:—

Number of divers engaged	85
Severe attacks in the superior region of the medulla.....	17
Cases of complete paraplegia.....	23
Deaths	15

To these should be added:—

Suffocated through the breaking of the air tube.....	1
Ditto, through failure in one of the valves of the pump ...	2

The first accident often happens, but if the diver be hauled up immediately he can generally be rescued in time, especially if he has had the presence of mind to close the exit valves, when the helmet retains air enough to last until the surface is reached. The rarer mischance of a valve breaking is more dangerous, as it usually happens when the man is working in very deep water.

(To be continued.)

V.—SELECTIONS FROM THE "RIVISTA INTERNAZIONALE DI MEDICINA E CHIRURGIA."

BY HENRY HANDFORD, M.D.

Decker. Contribution to the Etiology of Gastric Ulcer.—The author has made some experiments on dogs to show the part that eating, or more especially drinking, food at too high a temperature may play in the causation of gastric ulcer. He took two dogs, and gave to each of them, by means of an œsophageal tube, during anæsthesia, small quantities of liquid at a temperature of 122°F., on several occasions during three or four days. The dogs remained perfectly well, and were killed at the end of a few days. In the first was found at the pyloric end, near the lesser curvature, an extravasation of blood about half-inch in diameter between the mucous and muscular coats. In the second there were numerous congested spots, together with an extensive extravasation, and at the pylorus two typical gastric ulcers. The author mentions the case of a man who, by the directions of his medical attendant, frequently drank water at a temperature of 140°, and developed symptoms which could not be explained except upon the hypothesis of gastric ulcer.

Grundzsch. Cases of Total Suppression of the Secretion of Hydrochloric Acid without Carcinoma of the Stomach.—**Jaworski.** Absence of the Secretion of Hydrochloric Acid in the course of Catarrhal Affections of the Stomach.—**Beno-Lewy.** A case of Complete Atrophy of the Gastric Mucous Membrane.—These three authors deal with a subject which has been attracting much attention during the last two or three years. It has been stated that in carcinoma of the stomach the secretion of hydrochloric acid by the gastric mucous membrane ceases. This appears to be to a very large extent true, and the explanation seems to be in many cases, if not in all, that given in the case described by Beno-Lewy—viz., the coincident atrophy of the mucous membrane of the rest of the stomach. But the view that was at first put forward, that an absence of hydrochloric acid from the gastric secretion could be used as a diagnostic means between carcinoma and other affections of the stomach, does not seem to be borne out by further investigations, as the cases narrated by Grundzsch and Jaworski show.

Bernheim. A case of Peritonitis from Intestinal Perforation, followed by cure.—The patient was a boy aged fifteen, suffering from typhoid fever. Convalescence was established about the thirty-ninth day, but on the fiftieth day symptoms of perforation suddenly set in. There was sudden abdominal pain, a rigor, rise of temperature, pulse and respiration, meteorism, vomiting and suppression of urine. He was treated by opium and the cessation of all food by the mouth, and eventually got well.

Wagner. A case of Acute Polymyositis.—The patient was a tubercular woman of about thirty-six. She was attacked with rigidity and pain in the muscles, accompanied by œdema. Notwithstanding the swelling of the skin, the muscular masses felt doughy. Movement was painful. The electrical examination of the muscles did not show any change. She was treated by massage and faradisation, and showed some signs of improvement, but eventually died of asphyxia. After death the muscles were found to be all affected by a special change, giving them a pale red colour and homogeneous appearance, and increased rapidity. Microscopically there were found interfibrillary hæmorrhages, and œdema of the muscular fibres obscuring the striation. In places there were spaces filled with friable masses. Some fibres showed all the stages of cloudy swelling and of fatty degeneration. Elsewhere there was amyloid change. There was also interfibrillary cellular proliferation. The nerves also showed signs of peripheral neuritis. Very few cases of acute inflammation of the muscles have been described, and but little is yet known with certainty of its clinical course. Chronic inflammation and inflammation leading to calcification (myositis ossificans) are equally uncommon.

Prior. Clinical Value of Sulphate of Spartein.—In exceptional cases, about once in four times, it happens that spartein increases the flow of urine in the healthy individual, without the state of the circulation undergoing any appreciable alteration. It is not yet decided whether the diuretic action is due to a special influence exercised by spartein on the renal epithelium. Whether this be so or not, there seems good reason to admit that it is, at any rate, in part due to the action of spartein on the heart. The observations of the author indisputably prove the influence of the drug on the intra-vascular tension. Spartein has given favourable results in the most various forms of heart disease. But it is equally true that in many cases it has proved useless, especially in affections of the myo-cardium. It has been found most efficacious in failure of compensation in valvular disease. Its effects are perceptible within two or three hours after it has been given, and generally pass off in a few hours, sometimes only after two or three

days. When the secretion of urine is diminished in consequence of disturbance to the activity of the heart, the effects of spartein in regulating the cardiac action, and in producing diuresis proceed *pari passu*. The frequency of the pulse diminishes, and at the same time the vascular tension rises. Spartein has not been found to exert any beneficial influence on bronchial asthma. In only one case were ill results noted after the administration of spartein, and that was after thirty grains had been taken during two days. It produced irregularity in the cardiac rhythm, dyspnoea, nausea, giddiness, and weakness in the limbs. The average dose is 1½ to 3 grains three or more times a day. Smaller doses are usually inefficacious, and much larger ones are apt to produce the ill effects noted above. It is stated not to have any cumulative action. Finally the author considers the sulphate of spartein to be useful (1) in those cases of heart disease in which digitalis, which remains the remedy *par excellence*, disagrees and cannot be given; (2) where it is desired to strengthen and regulate the cardiac contraction in as short a time as possible; (3) in cases of astyole, when it produces favourable results without influencing the rhythm; (4) in all cases where it is wished to increase the flow of urine.

E. Puis. The Action of the Seeds of Strophanthus in general, and their use in Diseases of the Heart and of the Kidneys.—The author gives the results of his own observations on the action of the tincture of seeds of strophanthus as a cardiac tonic, diuretic, and anti-spasmodic. The action of the tincture was indisputable in cases of failure of accommodation from valvular disease, in fatty heart, arterial sclerosis, and in kidney disease. The pulse became fuller and stronger, its frequency was diminished by twelve to forty beats per minute, the rhythm improved, the *besoin de respirer* diminished, the secretion of urine increased, and the œdema disappeared in a few days. On the contrary, strophanthus completely failed in ascites due to cirrhosis of the liver, or to chronic peritonitis, as well as in palpitation from anæmia, chlorosis, or nervous disease. Strophanthus, according to Fraser, has the property of increasing the blood-pressure, without at the same time causing contraction of the small blood-vessels, and thus impeding the flow of blood through them, and increasing the work of the heart, as digitalis does. This property is specially advantageous in cases of Bright's disease.

VI.—INTERNATIONAL MEDICAL CONGRESS.¹

(Continued from page 570, December, 1887.)

VII.—DISEASES OF CHILDREN.

A PAPER was read from Dr. William Henry Day, of London, entitled—Some Observations on Headaches in Children, and their Relation to Mental Training.—The writer considered the characteristics of nervous, frontal and neuralgic headache, and the condition known as irritable brain. One form or the other is the first and most persistent symptom of the breaking down which follows the mental over-pressure which now prevails in education, and in the competitive examinations for entrance in every profession and in every branch of the public service. The irritable brain is not infrequently accompanied by myopia, hypermetropia, and astigmatism.

VIII.—LARYNGOLOGY.

Mr. Lennox Browne, of London, read a paper entitled—Recent Views as to the Pathology and Treatment of Tuberculosis of the Larynx.—The tubercular bacilli are generally admitted as a cause of specific laryngitis. Entrance is effected through the air-passages, and they are especially liable to accumulate in the upper parts of the lungs, where there is less respiratory action. The disease is usually secondary to pulmonary tuberculosis, and may be due to infection from the bacilli in the sputa coughed up and inoculating some abraded or unhealthy and irritated portion of the larynx, or the germs may find their way thither through the lymphatic system. The bacilli, like all parasites, act as an irritant, and eventually cause breaking down of the tubercular deposits. They must have an unhealthy or abraded surface on which to locate and thrive, and are prone to choose some weak point. Whether carried by the air, sputa, lymphatics, or general circulation, cases are recorded of infection through wounds and teeth that have been extracted. The author of the paper quoted cases confirming the same. The state of the health and the assimilation of food, together with tissue nutrition, have more to do with the development of tuberculosis than have locality or climatic conditions. Not only may we have laryngeal tuberculosis as a secondary infection, but we find cases where it is primary. The laryngeal symptoms may be the first to attract attention, and even become far advanced before pulmonary lesions can be detected. This is confirmed by many observers. The bacilli

¹ Taken from the *Medical Record and Register*, Philadelphia.

are recognized in the sputa, there is pain in the larynx, and difficult deglutition. The larynx presents the specific appearance. We find the infiltration, swelling, and ulcers, but still can detect no pulmonary lesion. There must have been some neglected chronic laryngitis, or some solution of these germs. Cases are reported where these local symptoms have yielded to treatment before pulmonary complications were added, and the patients were discharged apparently cured.

Treatment.—Where the general system is not broken down, or the disease advanced to the lungs, sea or mountain-air and high altitudes, especially in pine regions, are of vital importance. Oxygen, pure air, and the absence of germs are here more to be relied on than the thermal or climatic agents. Dr. Browne has ceased to advise the inhalation of medicated steam; but prefers oxidizing agents. Inhalations of vapour from turpentine, oil of eucalyptus, and menthol he has used with success. It is well established that tuberculosis is a blood-poison, as is pyæmia, septicæmia, and the like. Germicides should be used, and benefit will result. He places great confidence in atropine, not only as a sedative, but as a germicide as well. Arsenic often works in the same manner as does mercury in syphilis. So, also, do the salts of calcium, where there are tubercular deposits. The aniline treatment has not been a success, and the gaseous injections are still on trial. Experiments with sulphuretted hydrogen show temporary improvement, with diminution of the amount of sputa expectorated, less pain, and less distress from persistent cough. Still the permanent benefit is doubtful. This treatment needs careful supervision, and should not be trusted to the patients or their friends. The local treatment of tubercular laryngitis gives the best results, especially where systematic treatment is also employed to maintain health and nutrition. Use cocaine, and employ the galvano-cautery or lactic acid to destroy the deposits and induce healthy healing of the parts. Where the infections are local, our success is in proportion to their accessibility. He does not like iodoform or iodol dissolved in ether, as the ether is too much of an irritant, and prefers a brush made with cotton to the spray, in that it coats the surface better, and is pressed into folds which are protected from the spray by the spasm of the larynx. The continued use of the spray he considers dangerous to the cilia of the epithelial cells. Local and systematic sedatives are emphatically called for. Insufflation is not as good as where emulsions are made with acacia, as it is apt to form cakes. Cocaine gives temporary relief, but morphia, belladonna, and balsam are more permanent in their relief of both pain and cough. The surgical measures are to scrape away the deposits with curette or forceps, under cocaine, and apply lactic acid. Do not stab or incise; it may relieve tension and congestion, but is bad in that it gives new foci for infection. For the same reason it is better not to remove glomerulata, unless respiration is seriously interfered with. Tracheotomy, for the purpose of giving rest to the larynx, is useless, and worse. The larynx does not then receive the necessary air and oxygen, and bacilli-infected mucus accumulates. The cold and dry air irritates the lungs and may induce pulmonary complications; besides, the wound may become infected. Intubation of the larynx likewise causes too much irritation and aggravates the trouble, independent of the risk of blocking up the tube; even refrain from removing elongated uvula. He does not approve of the recent suggestion of extirpating diseased portions. Many apparent cures are reported, and he has had such cases himself, but is inclined to doubt their permanence. We can improve the condition of the larynx, stop pain and cough, cause better assimilation of food, and improve nutrition. There result local relief and apparently satisfactory results, but scarcely a cure, as claimed by Schmidt, Bosworth, and others.

Important suggestions.—(1) Early diagnosis and treatment. (2) Do not be carried away with new remedies. (3) Never be too active in destroying tissue; heal instead. (4) It is better to observe facts and be influenced by the experience of many, than by the new ideas of the few.

Dr. Sinclair Coghill, Ventnor, England, advised to treat more to alleviate pain and distress, which tend to shorten life, and obtain as much rest for the parts as possible. Look to body-nutrition. He also quoted cases of primary tubercular laryngitis from infection. The greatest benefit was from iodoform and morphia by careful insufflation. He had seen cases apparently cured. The medium or tissue in which the bacilli thrive was to him more important than the bacilli themselves. We do not see parasites in vigorous tissues; those well nourished are not liable to infection. Do not trust to local treatment alone, but improve digestion and assimilation.

IX.—THERAPEUTICS AND MATERIA MEDICA.

The following papers were contributed to this section:—

Dr. Hugh Hamilton read a paper entitled **The Chemical Philosophy of Remedy.**—He attributed disease to chemical changes either dependent upon defects of nutrition or bacillary invasion. A remedy

might be defined as the use of agents to prevent disease, relieve symptoms, or to repair injury. Antisepticism is suggested by the discovery of the activity of bacteria in producing disease. Changes are readily induced in the chemical composition of the blood, thus forming compounds which may be either physiological or toxic. Clinical experience shows that remedies are those containing efficient oxidizers, active appropriators of hydrogen, or by substitution of radicals succeed in destroying the pernicious products of germs.

Dr. Murrell (London) referred to the general neglect of this branch of medical investigation. Dr. Wormley, and Dr. Stockman, of Edinburgh, were nearly alone in making studies in this field.

Dr. Stockman made an interesting reference to some investigations on the pathology of phthisis made by Dr. Philips, of Edinburgh, on the formation of toxic bodies in phthical cavities. A substance (chemical, and of the nature of a ptomaine) has been detected in the sputa and lungs of a phthical subject, which cause, when injected in mammals or frogs' fever, emaciation, and death. It was also found that the effects of this toxic agent were very largely counteracted by atropine or belladonna.

Dr. Coghill referred to the corroborative fact that the system in a state of disease (tuberculosis) will bear much larger doses of atropine without producing toxic effects than in health.

Dr. J. G. Sinclair Coghill, of Ventnor, Isle of Wight, read a paper on **Chlorate of Potash.** The varying estimation in which chlorate of potash has been held is due to the prevalence of a false idea as to its supplying oxygen to the blood, and also to its injudicious administration. As a salt exceptionally rich in oxygen, it has, without decomposition, the valuable property, *per se*, by its mere presence, of apparently oxygenating or aerating the blood, and so by restoring or exalting this vital character of the circulating fluid, influencing to a corresponding degree the nutrition and functional activity of the various tissues and organs of the body. Beyond this it does not appear to have any specific action in any disease. A remarkable influence upon nutrition of the fetus has been demonstrated by its administration during the period of gestation. Its effects in preventing dyspnoea have been noticed by mountain-climbers; and the author had obtained excellent results in similar condition, coming on in phthisis or chronic bronchitis. It is also a valuable tonic and stimulant in cases of cardiac debility, either organic or functional; also where the blood is impoverished (anæmia or chlorosis). Its value in local conditions of inflammation of mucous membranes is universally recognized in conjunction with arsenic internally. It is very curative in clergyman's sore throat. The ordinary chlorate of potash lozenges are too strong; two grains and a half are sufficient to a trochee to avoid caustic effects.

Dr. H. A. Hare referred to a case of death after taking chlorate of potash in which the kidneys were found swarming with bacilli. Here there certainly was no antiseptic effect. The salt cannot give oxygen to the blood, as it is not decomposed in the body.

Dr. J. Solis Cohen said that he had found this agent most useful in diphtheria.

Dr. Traill Green recommended the substitution of more soluble chlorate of sodium.

Dr. G. E. Magruder found it useful in catarrhal conditions of bowels and their passages.

Dr. Murrell said that the sodium salt has been largely used in England since the publication of Dr. Sainsbury's paper in the *Lancet* calling attention to discs of chlorate of potash.

Dr. Woodbury said that an agent may be expelled from the organism in the form in which it was taken in (*i.e.*, sodium chloride) and yet be available for nutrition and useful as a therapeutic agent. It is probable that remedies act, *per se*, and not on account of peculiar chemical composition (*ex. qd.*, oxalic acid and starch). Chlorate of potash being feebly soluble may be deposited in the tubules of the kidney, and, where possible, might, therefore, be substituted by the soluble sodium salt. As the potassium chlorate is depressing in its effects a very colourable imitation of diphtheria may readily be made from an ordinary case of pharyngitis, and death from asthenia may even be produced.

Drs. Carter and Pollock said that they had used the agent with excellent effect in the condition of catarrh.

Dr. Stewart had used it in bad odour of the breath.

Dr. Charles D. F. Phillips, of London, reported the results of a very valuable original research on **The Action of Certain Drugs on the Circulation and Secretion of the Kidney.** It contained the results of a series of experiments by means of Roy's onkometer upon the action of certain agents (caffeine, strophanthine, digitaline, ulexine, and spartein) upon the kidneys. It was claimed that every true diuretic increases the circulation of blood in the kidney. Digitaline is not a true diuretic, as it increases the secretion of urine only secondarily by increasing the blood pressure and hastening the flow of blood through the kidney.

Dr. Murrell said that the subject of diuretics is one upon which more information is required, and he considered the paper a valuable contribution to the *rationale* of their action. He inquired what advantages the onkometer possesses over Marcy's tympanum.

Dr. Phillips said it was much simpler and more accurate in its results, differing totally in construction from Marcy's.

Dr. Woodbury asked if the proportion of the solid ingredients had been taken into consideration in estimating the diuretic action of the agents mentioned. He regarded water as only incidental to the urinary secretion (for instance, snakes). Urine does not contain any, that of birds is nearly solid. The essential elements are the urea and salts, and their presence and amount must decide diuretic effect. He asked if such chemical determinations had been made in connection with the experiments reported.

Dr. Phillips: Such experiments have been made but are not yet ready for publication.

Dr. Samuel S. Wallian read a paper entitled **The Neglect of New Medicinal Therapeutics**. The author of this paper was sceptical as to the value of drugs in arresting disease or averting death.

Dr. John E. Brackett (Washington) read a paper on **Rhamnus Purshiana, or Cascara Sagrada**. This plant belongs to the Rhamnaceæ and is indigenous and peculiar to the Pacific slope of this country. The herb is larger than other varieties of rhamnus. Its chemistry has been carefully studied within a few years. It belongs to the tonic astringent and resin-bearing class of cathartic agents. In small doses it has a tonic and astringent effect owing to its contained tannic acid. Given in purgative doses, the effects closely resemble those of rhubarb. It is most useful in treating chronic constipation. It should be given for months, regulating the dose according to necessity. Proper attention must also be given to remove any cause for the constipation which may be present. Various solid preparations were described, none of the preparations being official. The dose of fluid extract (best preparation) as a laxative is ℥ v-xv, or as a purgative is ℥ xv-xx. In one case of constipation with bleeding hæmorrhoids, one minim given every hour was sufficient to entirely relieve the condition.

Dr. Murrell said that the drug under discussion is official in the British pharmacopœia, and that they are perfectly familiar with it in England. It is an old remedy, and they used to give it to dogs. He did not consider that it had any special advantages over buckthorn.

Dr. Phillips had obtained very satisfactory results from the use of cascara, and considered it superior to both senna and rhubarb in constipation.

Dr. Ralph Stockman, Edinburgh, Scotland, read a paper on **The Pharmacology of some Bodies Derived from Morphine**.—The experiments were conducted jointly by D. B. Dott, F.R.S.E., and Ralph Stockman, M.D. The relationship between chemical constitution and physiological action must always be a subject of deep interest to pharmacologists. In this short paper they proposed to mention briefly the changes in action resulting from various modifications in the constitution of morphine. How, in 1854, by acting on morphine with methyl iodide, obtained a body which he named hydriodate of ethylmorphia, and which he regarded as a substitution product, the methyl iodide being supposed by him to replace one of the hydrogen atoms in morphine. In the light of our present chemical knowledge, we regard How's body as an addition product, iodide of methyl (CH₃I) being simply tacked on to the morphine molecule. In 1869, Crum Brown and Fraser investigated this body among others, and showed that the original action of morphine is quite lost, and a curare action substituted in its stead. From their nomenclature there can be no doubt that these observers regarded such bodies as addition, and not as substitution compounds. Notwithstanding this, we find that in all text-books and reference-books, these substances are always named and described as if they were substitution and not addition bodies. It is at present generally held that the substitution of methyl for hydrogen in an alkaloid causes the latter to act like curare, no matter what its original action may have been. The addition products, however, are very different in action from the substitution products. The formula of morphine is C₁₇H₁₇NO₃(OH)₂, and it contains, therefore, two molecules of hydroxyl. It is the hydroxyl-hydrogen atoms which are replaced most easily by alcohol radicals. With regard to the action of morphine, it may be divided into two stages—(1) narcosis, succeeded by (2) tetanus. Methylmorphine, C₁₇H₁₈(CH₃)₃NO₃, is morphine in which one H has been replaced by CH₃. Codeine has the same constitution, and this body is simply codeine prepared artificially from morphine. The action is exactly the same as that of codeine derived directly from opium. Ethylmorphine, C₁₇H₁₈(C₂H₅)NO₃, has the same action exactly as methylmorphine. Acetylmorphine, C₁₇H₁₈(C₂H₃O)NO₃, and diacetylmorphine, C₁₇H₁₆(C₂H₃O)₂NO₃, have a similar action to the two preceding bodies. That is, they produce narcosis in very small doses, which is followed by tetanus when larger doses are given. All these

bodies are much more active than morphine, and smaller doses are required. In dogs, however, they produce much greater distress, and much more marked vomiting and diarrhœa. From our examination of their action, we think that none of them are in a position to replace morphine clinically.

Dr. Hull inquired if the author could give any reason why acetylmorphine was so much more energetic in its action than the methyl compound.

Dr. Stockman could not tell, but thought that the present investigation, if continued for some years longer, would throw light upon the subject.

Dr. Murrell referred to emetic effect of apomorphine, which is more efficient than apocodeine for this purpose. The recommendation of the British pharmacopœia to prepare the solution extemporaneously is puerile, since the only change is in the colour. He had a solution four years old which is as physiologically active now as ever.

Dr. Stockman said that codeine is usually given in larger doses than morphine, whereas being more poisonous it should be given in smaller doses.

Dr. Brackett said that he was surprised to hear this statement, since he preferred codeine as being more acceptable to the stomach.

Dr. A. L. A. Toboldt read a paper on **Carlsbad Mineral Waters**, advocating their use in depraved nutrition, melancholia, diabetes, obesity, etc.

A paper on **The So-called Antiseptic Action of Calomel when given in Large Doses** was read by Dr. George S. Hall. In an epidemic of dysentery the author had in some desperate cases obtained prompt beneficial results by the exhibition of a few drachm doses of calomel. He explained its effects by its prompt action upon the liver, causing a free flow of bile, relieving hepatic and intestinal congestion, and sweeping out the contents of the bowels. Secondly, he thought that it might, by becoming dissolved in the bile, as described by Headland, exert an antiseptic effect upon the contents of the intestinal tube.

The discussion took a direction toward the relative value of large and small doses of calomel, and was participated in by Drs. Upshur and Gnezda, of Berlin; Dunlap, Ramsey, Trall, Green.

The Chemistry and Pharmacology of the Nitrites and of Nitro-Glycerine, by GEORGE ARMSTRONG ATKINSON, M.B.C.M., was presented, and in the absence of the author was read by Dr. RALPH STOCKMAN, of Edinburgh. The action of the salts of nitrous acid resembles closely those of the acid which is the essential basis of this group of medicinal agents. Nitrous acid is remarkably unstable; in watery solution of 3000 it may be used for a day or two for experimentation, but it has no advantage over a solution of nitrite of sodium, which possesses identical effects in so far as an acid can be considered identical with one of its salts. Our knowledge of the action of the nitrite group has been chiefly derived from a study of the effects produced by nitrite of amyl. Since here the base (amyl) has a decided action of its own, it is necessary to select a salt in which the base in its combination possesses no well-marked physiological activity. The resemblance between the action of sodium nitrate and amyl nitrate has been pointed out by Gamgee, Lauder Brunton, Hay, Leech, and others. Barth described its highly poisonous qualities. Binz showed that it caused death from general paralysis, especially of the muscular system, no convulsions preceding the fatal issue. Reichert considered it identical in its toxic effects with potassium nitrite. Its effects may be summed up as a paralyzer of muscular tissue, non-striated muscle being affected less quickly than striated. The brain-centres are also affected. The blood becomes of a chocolate colour in mammals (methæmoglobin), respirations are slowed, and temperature slightly lowered. Death occurs in frogs from cessation of respiration; after the heart has stopped its movements it is found in full diastole and quite inexcitable. *Post-mortem* rigidity comes on early. In rabbits, three grains were a fatal dose in one three pounds in weight. The same appearances were found *post-mortem*. In man, small doses (eight grains) produced great tendency to faintness and considerable acceleration of pulse, with decided lowering of arterial tension. Paralysis of respiration is due to the effect of the nitrite on the muscular system chiefly, but also in part to the effect on the medullary centre. Small doses slightly increase the flow of urine; large always diminish it. Urea and uric acid are almost unaffected. Sugar appears in the urine of rabbits after some hours, if the animal be kept very decidedly under the influence of the drug; but rapidly disappears if the administration of the drug be stopped. The nitrite is largely destroyed in the system, being partly, however, excreted as nitrate, partly, probably, as urea; a portion of it is excreted as nitrite. The pharmacology of the other nitrite is briefly dismissed. Nitrite of potassium, nitrite of ethyl, nitrite of amyl act in very similar manner to the sodium salt. Nitro-glycerine acts partly as a nitrite, and partly per

se. In small doses it exerts the nitrite effect as a paralyzer; in large doses it produces convulsions.

Dr. Murrell, of London, England, referred to his discovery of the usefulness of nitrite of amyl in the condition of angina pectoris, and he always advised patients to carry the medicine in a small bottle. The pearls he considered too expensive for use. The tabellæ (Ch.B.) of nitro-glycerine, made with chocolate, he considered dangerous, from their resemblance to confections. He has used nitro-glycerine in one per cent. solution (dose \mathbb{M} v.—xv.) in cases of neuralgia of the fifth nerve, surgical shock, asthma (spasmodic and cardiac), and reflex neuroses. He preferred this in epilepsy to the nitrite of sodium, which had been recommended by Dr. Law. In angina, patients can take fifteen minims when they feel the attack coming on; such patients should carry a small bottle with them for immediate use when they feel the attack coming on, otherwise they might perish before the agent could be obtained. He gave an amusing instance of the difficulty of obtaining nitro-glycerine in England at present.

Dr. Upshur, of Richmond, Va., reported a case in which the inhalation of nitrite of amyl, in a patient suffering with heart-failure and puerperal septicæmia, undoubtedly saved life by cautiously continuing the remedy, whenever there was failure of the pulse, for about forty-eight hours, when it was withdrawn and diffusible stimulants substituted.

Dr. Wade, of Holly, Mich., prefers a ten per cent. alcoholic solution of the amyl nitrite, which he uses by inhalation. He regards it as the best form of cardiac stimulant in sudden emergencies.

Dr. Phillips, of London, England, had experienced headache, dizziness, and faintness after taking five minims of a one per cent. solution of nitro-glycerine hypodermatically. He had found the tabellæ (each \mathbb{M} j. of a one per cent. solution) useful in angina pectoris. Patients usually will not tolerate more than three or four of these, but some will require twenty-five or thirty. The effect of sodium nitrite is more prolonged than that of ethereal nitrates, and for this reason he prefers to give it in dyspnoea attending bronchitis.

Dr. Brackett, of Washington, D.C., reported a case of successful treatment of an epileptic by the use of amyl nitrite by inhalation.

Dr. Wade, of Holly, Mich., recommended nitro-glycerine in cases of threatened local asphyxia of brain from embolism or thrombosis; he had had good results.

Dr. Phillips, in answer to a question, said that he would regard fifteen minims of solution of nitro-glycerine, hypodermatically given, as a dangerous dose.

Dr. Murrell thought that there was no advantage to be derived from its hypodermic use, since it acts so quickly when swallowed.

The next paper was read in German, **On the Poison of the Cobra**, by Dr. Julius Gnezda, of Berlin. The substance from which the experiments were made was brought from India by Dr. Robert Koch. It was obtained by making the cobras strike some shells covered with sheepskin. The poison was afterwards dried. It is soluble in water, but not in alcohol or ether; its activity is lost by boiling. It is uniformly poisonous to higher animals. The European hedgehog and the ordinary swine of this country are popularly believed to enjoy an immunity, but this is explained by mechanical obstacles to absorption in these cases. The poison is contained in an albuminous fluid, but its chemical construction is not as yet settled. It is poisonous when applied to mucous surfaces, without causing blisters. The effect is very marked when the poison is injected into the circulation. The blood-pressure is at first increased, the blood-corpuscles are changed in their shape, and the spectrum of the blood is characteristic. It was found that death did not occur at once, but after about half an hour, and as the result of failure of respiration, so that the Indian Government was induced to recommend artificial respiration in such cases. At present, no antidote is generally accepted. Since it is not known whether the poison is an alkaloid, a ptomaine, or other body, such a question is at present only a speculation. As it is secreted by salivary glands, it is probably an albuminous body. Permanganate of potash has not been found an efficient antidote.

Dr. Phillips, of London, regarded the paper as an interesting contribution to our knowledge of the characteristics of snake-poison.

Dr. Lewin, of Berlin, could not harmonize the report made of the spectroscopic appearance with the usual characters of the blood-spectrum. The appearance was peculiar, and needed further investigation. With regard to the antidote, it may be acknowledged that there can be no general antidote to counteract the poison after it gets into the system; but if the remedy can be injected *locally* into the wounds, then potassium permanganate and a number of agents having a caustic effect may neutralise or destroy it.

Dr. Woodbury said that in regard to the nature of the poison, Drs. Mitchell and Reichert, of Philadelphia, had conducted a series of experiments which seemed to establish the fact that the snake-poison

is not a single substance, but is probably composed of two, one of which is of the nature of a peptone. In the "Life of Francis Buckland," the English naturalist, the incident is given of Mr. Buckland having been inoculated with a very minute portion of the virus, accidentally, under his finger-nail. He shortly afterwards suffered with intense pain at the back of his head, faintness, and collapse, from which he recovered with difficulty after taking large doses of ammonia and brandy. He attributed his recovery to the antidotal effects of these agents. We may conclude that when a minute amount has been absorbed, ammonia and alcohol are antidotal, but where any considerable amount is received into the circulation the case is hopeless.

Dr. Traill Green said that he had made some experiments with snake-poison, and had been surprised by the quickness of the effects on a rat which had been bitten over the jugular vein. Death was instantaneous where the poison entered the blood directly.

Dr. L. Lewin, of Berlin, read a paper on **The Maximal Doses of Drugs**.—Of the many difficulties which pharmacotherapy has to strive against, the dosage of medicine is by no means the least. Variation in doses arises (1) from the differences (2) between one person and another; (3) between single individuals at different times; (4) between the intensity of the disease in men suffering from the same affection; (5) between diseases in which the same drug is used. (2) From the variability in the activity of the greater part of our remedies. At the same time it is possible and desirable to establish the usual dose of agents which are active in relatively small quantity, and which readily produce toxic effects when the dose is increased. Two groups of preparations fall under this head:—(1) Plants (crude) and plant-products, and their pharmaceutical representatives; and (2) chemical substances such as metalloids, metallic salts, and carbon-compounds. The first group is almost universally inconstant in its effects, and thus far an international agreement as to their maximal doses has not been possible. The remedies of the second group, on the contrary, are nearly uniform, and the doses beyond which they cannot be given without danger can be determined by physiological experiments; but although the basis for such agreement is tolerably broad, yet the statements given in different pharmacopœias in many cases vary greatly. Such variation can be easily explained in the case of the first group, but becomes incomprehensible in the second. From the results of his own observation, and a comparison of the most of the pharmacopœias which give maximal doses, the author had constructed a table of the ordinary maximal doses of many of the drugs belonging to the second group, which he appended to this communication. Such a list should be added to the pharmacopœias of such countries as have no maximal dosage, for the convenience of the practitioner, who thus would be enabled to prescribe such drugs with confidence even if they should not be generally used in his own country. From this Congress he hoped the influence would go out which would make such an international agreement possible.

Dr. F. Woodbury instanced the varying effect from chloral hydrate, which is sometimes taken safely in large doses, and at other times it proves rapidly fatal, even in doses of ten grains. He inquired if this effect could be due to the coincidence of digestion and the change of the chloral into chloroform by the alkaline bile, as Liebig believed.

Dr. Stockman said that the amount of chloroform liberated from ten or fifteen grains of chloral hydrate would be so small as to be trifling. He thought that it was not decomposed, but that it acted as chloral hydrate. A good deal of dissatisfaction has been felt with chloral on account of its depressing action, and other agents, such as hypnone and urethane, have lately been introduced to take its place.

Dr. H. G. Beyer, U.S.N., said that Mayer had explained the action of chloral hydrate as that of trichloroacetic acid; and, in fact all other halogen derivatives of organic compounds produce their effects by the chlorine which they contain, which is said to be set free whenever these compounds are brought into an acid medium. For instance, the cells of the cerebrum are supposed to react slightly acid during intellectual activity, but when trichloroacetate of sodium is injected into the blood, the chemical compound is decomposed, chlorine is set free, and sleep produced, or intellectual torpor, in the same manner as this is done by chlorine hydrate.

Dr. John N. Upshur, of Richmond, Va., read a paper entitled **The Emmenagogue Action of the Manganese Preparations**.—The usefulness of potassium permanganate when used as a deodoriser and disinfectant is based upon its readiness to part with its oxygen. Its mode of action is not clear, but in small doses internally it acts like iron, improves the general nutrition, and causes an increased and easier flow of blood at the menstrual period. The permanganate of potassium and the oxide of manganese are both used, the latter being more acceptable to the stomach than the former. It is given in gelatine-coated pills (gr. j. to ij. after meals), and to get its full effect it must be given before three successive periods. In amenorrhœa, due to an impoverished and cachectic condition of the blood, oxide of manganese,

given in combination with some form of iron, will undoubtedly prove of benefit. It is also useful where the condition is due to defective nervous or vascular supply, when pain is present due to functional disorder; also when *no* obstruction exists, but the endometrium is in a state of chronic congestion, or is affected by inflammation due to obstruction which has been removed; in all cases of vicarious menstruation; in amenorrhœa of plethora, when the menstrual derangement is due to functional and not mechanical or obstructive cause, and especially in membranous dysmenorrhœa.

The following papers were read by title:—

On Collinsonia Canadensis, by John V. Shoemaker, M.D.

Cold as a Remedy in Inflammatory Affections, by Hiram Corson, M.D.

The Therapeutics of Alcohol in Disease, by E. N. Liell, M.D.

On Electrical Stimulation of the Mammalian Heart, by J. A. McWilliam, M.D., of Aberdeen, Scotland.

Dr. Julius Anndeer, of Munich, read a paper on **Resorcin**. The author presented specimens of pure resorcin, crystallized, and in combination with cocoa butter, keratin-coated pills and resorcin soap. Resorcin is powerfully antiseptic. It is not irritating to the skin, and is especially useful in the treatment of keloid and similar new growths. Internally it may be given in the form of keratin-coated pills as recommended by Unna. In diseases of the genito-urinary tract it is very serviceable.

Dr. L. Lewin said that the labours of Dr. Anndeer in connection with resorcin were well-known to all present. There was danger, however, of exalting resorcin at the expense of other members of the group to which it belongs, such as carbolic acid, phenol, thymol, and hydroquinone. Dr. Unna had claimed that resorcin was reducing substance in the laboratory, but whether or not it acts in this way in the human system has by no means been settled. It may even be an oxidizer; no one knows how it acts. It is claimed by the author of the paper that it is not poisonous, but when taken in doses of five or six grams per diem it may produce cerebral and sensory disorders resembling mania. This is certainly a toxic effect. With regard to the keratin-coated pills it is not certain that they will pass through the stomach in order to dissolve in the small intestine, or if they reach the jejunum they might very readily slip through without being dissolved. He had found that in the mouths of dogs the keratin coating would dissolve. Moreover, even if the pills were to pass through the stomach undissolved there is no evidence that they would remain and medicate the desired spot. He did not believe in local antiseptic medication of the intestinal tract. He asked why resorcin was better than thymol or other similar agents—phenol, hydroquinone, etc.?

Dr. Beyer, U.S.N., said that he had made some experiments with resorcin and regarded it as an oxidizing rather than a reducing agent. In mammalian blood it acted as an antiseptic, but did not reduce the oxyhæmoglobin.

Dr. Anndeer repeated the statement that resorcin as ordinarily taken is not poisonous. It is antiseptic and quite unirritating to the skin.

Dr. William Ward read a paper entitled **Vicarious Respiration Superinduced in Certain Diseases by Administration of Oxygen-yielding Compounds through the Alimentary Tract**.

The paper was largely devoted to the physiology of respiration and the possibility of supplementing the functions of the lungs by the administration of agents containing oxygen given per os.

A meeting of the Council was held at the close of the session, and a complimentary vote of thanks was passed, on motion of Dr. Phillips, of London, to the venerable President, Dr. Traill Green, of Easton, Pa., for the dignity and urbanity which he had manifested in presiding over the deliberations of the Section and for the faithful performance of his arduous duties, both before and after the assembling of the Congress, and which contributed materially to its success.

(To be continued.)

The Spirit of the Societies.

GLASGOW OBSTETRICAL AND GYNECOLOGICAL SOCIETY.—The second meeting of the Third Session was held in the Faculty Hall, St. Vincent Street, on Wednesday, November 23rd, Dr. ABRAHAM WALLACE, President, in the chair. I. McGregor Robertson, M.D., C.M., and H. St. Clair Gray, M.B., C.M., were duly elected members.

There was a large gathering of the profession generally to hear Mr. SKENE KEITH, of Edinburgh, who read a paper on **The Treatment of Fibroid Tumours of the Uterus by Electricity**.—Mr. Keith referred to the fact of this kind of treatment having already suffered from abuse owing to inexperience of the force dealt with, and stated it to have been Dr. Apostoli's merit to place the method on a scientific basis,

and then indicated the apparatus required, of which a battery, a rheostat, and a collector were the principal. The shock is an induction one, and an efficient rheostat prevented this from being undue in amount or intensity. The abdominal mould of moist clay he found to be best made with salt water; and as a preliminary the vagina should be washed with a solution of perchloride and stuffed with iodoform cotton wool. He then gave details of six cases which are here epitomised.

CASE I.—Menorrhagia. Tumour reaching three inches above pubes. First shock of 200 milleampères; sixth raised to 300 for eight minutes; after twenty-six applications, recovery.

CASE II.—Menorrhagia. Anemic. Ergotine first had fair trial. The tumour in this case rose as high as the umbilicus before the menstrual flux. After seventeen applications of 100 to 200 milleampères, recovery, the tumour being reduced so as to give a uterine measurement of three and a half inches. The recovery in this case, albeit, was followed by a relapse.

CASE III.—A fibroid of fifteen years duration; *post climacteric*; æt. 60. Abdomen and pelvis entirely filled with tumour about twenty pounds weight. The current used was from 100 to 200 milleampères. After the fifth application the tumour was so much smaller that it was estimated it had shrunk one third, or lost from six to eight pounds in weight, with corresponding amelioration of other symptoms.

CASE IV.—A patient of Dr. Tanner's. So weak she couldn't walk without assistance. Tumour rose fully one inch above umbilicus. It was doubtful whether hysterectomy would have been successful in such a case. Immediate benefit followed the use of electric current, and after the fifth she walked two miles, and her dress was already too loose. When last heard of she was "very well."

CASE V.—Menorrhagia of some years duration. Small fibroid uterus three and a half inches. Current 200 milleampères, the sound being attached to the negative pole. After seventh application the menorrhagia was still present. Several positive applications were then made, and the patient left well.

CASE VI.—A case from Dr. Bruce: anæmic, but very little pain. Tumour filling abdomen and pelvis. Applications made through needle attached to negative pole on September 11th and October 20th. Two days after the latter date there was no pulsation, and on the 29th she was better. After eighteen applications the tumour was reduced in size two inches, and the patient was able to walk two miles.

In conclusion he summarised the results as consisting in (1) diminished hæmorrhage, (2) diminished size of tumour, and (3) tonic general effects. He had noted that in no case was the excretion of urea diminished. As to the amount of risk attending the operations, he said that he had made 1,350 applications now, in his own and his father's *clientèle*, and had only one accident. He impressed upon his audience, however, the necessity of extreme care, as the least inflammatory condition was a contra indication. In suitable cases he thought it offered relief without the risks and terror of hysterectomy.

Dr. MACINTYRE then gave a **Demonstration of Apparatus used for Electro-Therapeutics**.—He reminded the Society that electricity manifested itself in the three forms—light, heat, and motion; and that it existed in two states—viz., dynamic and static, instancing the means whereby these may be demonstrated. He then passed to a consideration (1) of the physical laws, (2) the modes of mensuration, and (3) the physiological action of the electric current. The clinical purposes were summarised thus—viz.:

To stimulate nervous system	} A current of from twenty to thirty
" " muscular "		" " milleampères being requisite; and
To obtain electrolytic action	} A current of thirty ampères being
" " illumination "		" " requisite.

The positive electrode induced contraction and coagulation, and the negative decomposition of tissues. He remarked *en passant* that a thoroughly satisfactory ampère metre was still a desideratum.

Dr. STIRTON opened the discussion by stating that he certainly was not in a position to criticise, his experience of six cases having been so small. He had always been successful in getting the electrode into the tumours through the os, but had not used any other than the positive pole owing to the instructions given by Dr. Apostoli. The first effect he had observed was that the tumour became movable, and the second that it became hard under the hand. He had used the negative current in a case of amenorrhœa from innervation with success after the first application; but the last condition of the patient was not known. He could confirm Mr. Keith's result generally; but he had had one unfortunate result, the patient operated on having been the subject of cancer of the rectum as well as fibroid tumour of uterus. The positive electrode was used, and nothing but blood issued from the rectum afterwards.

Dr. KNOX had used the method once—unsuccessfully. The patient was æt. 45, suffering from a bleeding fibroid. He had passed a current of only sixty milleampères for five minutes. There had been no obstruction and no difficulty in getting the sound to enter. Death, however,

ensued, and at the autopsy evidence was found of pelvic cellulitis surrounding the uterine neck with pus and metastatic abscesses. He dwelt upon the difficulty of making correct measurements of electrical currents.

Dr. ABRAHAM WALLACE (President) here read an extract from Dr. Apostoli's paper, the purport of which was to enjoin the use of the positive electrode in hæmorrhagic cases and the negative in others.

Dr. OLIPHANT asked what antiseptic precautions had been used in Dr. Knox's case, and received reply that the vagina had been washed out with perchloride solution.

Dr. FLEMING said he was using the method in cases of enlarged prostate.

Dr. W. L. REID found that few men could speak verily of absolute cure in any case. His idea was that the positive pole acts very much as the actual cautery in fibroids and subinvolution, and preferred it.

Dr. MORTON asked if this method had been tried in the case of fibro-plastic or recurrent fibroids; and

Dr. FLEMING replied that he had tried it in such a case, but couldn't say that it had any success.

Mr. KEITH, in replying, thanked the audience, and particularly Dr. Macintyre. He did not find the negative pole any more dangerous than the positive. Albeit it was certainly not advisable to begin with a strong current. He thought 100 milleampères quite sufficient. The punctures should never go deeper than one inch; and he showed a sound covered with gum elastic to within one inch of its extremity. He could not corroborate Dr. Stirton's observation about the hardening of the tumour. In one case he had induced menstruation for *one day only* in an amenorrhœic (twelve months). He regarded the deaths reported as accidental. He could not agree with Dr. Reid at all. Punctures heal at once, even after a dozen times. If there was any caustic action this could not be; sloughs would be frequent, whereas they were rare.

Here Dr. REID referred to Dr. Apostoli's paper, where he refers to "discharges;" and Dr. STIRTON asked whether there was no difference in *kind* of action between the positive and negative? Mr. KEITH replied that Dr. Apostoli referred, in the passage cited, to attempts at making an artificial opening into a tumour, and could not give an explicit answer to Dr. Stirton, but referred to Case II.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.—A meeting of the Society was held on November 18th, Dr. RANSOM, F.R.S., presiding.

Dr. HANDFORD read a paper upon **Certain Clinical and Pathological Points in connection with Enteric Fever**, and exhibited numerous drawings of the minute changes in the liver, spleen, stomach, and intestines in this disease.

Dr. HANDFORD also showed tracings of **Muscular Tremors** and a photograph of **Muscular Wasting**, probably due to peripheral neuritis, in enteric fever.

Dr. MARSHALL brought forward the following cases:—Two sisters affected by so-called **Congenital Dislocation of the Hip-joint**. A third girl in the same family had the right hip-joint at fault in a like manner. Of three other members of the same family two died before walking, and the deformity was not therefore noticed, if it existed; and the third, a boy, showed no signs of the trouble at three years of age, when he died.—**Salivary Calculus from a Lady**, 54 years of age (for Mr. Wright).—A piece of **Hazel-nut removed from the Trachea** after death, which had been swallowed nine weeks before admission into the Children's Hospital. Tracheotomy was done unsuccessfully for the purpose of removing the foreign body. The point of impaction was at the bifurcation of the trachea. The left lung was collapsed.

Mr. ANDERSON showed the following specimens:—**Extensive Rupture of the Liver** caused by the passage of a cart wheel over the body of a child seven years old. The rupture was situated at the junction of the right and left lobes, and was so extensive as to almost divide the organ into two parts. The child lived eleven hours, and died from hæmorrhage into the peritoneal cavity. There was not the least evidence of injury externally.—**Dislocation of the Cervical Spine without Fracture**. The specimen was taken from the body of a middle-aged man who had fallen headlong down a flight of steps. He was brought to the hospital some hours after the accident, and only lived a minute or two after his admission. The fourth cervical vertebra was dislocated forwards on to the fifth. The dislocation was bilateral, and the displacement slight. The anterior common ligament remained intact. The cord appeared to have been stretched, but was otherwise uninjured, as were also the membranes round it. There was no fracture.

Mr. PRYER showed (for Dr. Elder) a **Uterine Myomata** removed successfully from a woman, æt. 27 years. It was of very rapid growth, and by its pressure symptoms had quite unfitted patient for getting about. Its weight was ten pounds; and the pedicle was secured by Koeberle's serre-nœud.

Mr. PRYER related the following case for Mr. Truman, and showed

the specimen referred to:—Mrs. G., aged twenty-eight. First and only child eight years ago. Dysmenorrhœa since June, 1886. Abscission of cervix; pain relieved for three months only. Present condition: pain three days before, during, and two days after period, which lasts five days; cannot do any work at all for the ten days. Sexual congress most painful. In right lateral fornix is an enlarged and painful ovary. In median line, slightly to left, is a tumour the size of an orange, to be felt also above pubes; movable independently of uterus to some extent; so resistant as to give the impression of a solid growth. Uterine cavity of normal length. Diagnosis alternative between a parovarian cyst and a myoma with long pedicle. Laparotomy on November 9th, 1887. Right ovary contained a small cystic tumour. The larger tumour was a cyst, parovarian, containing fourteen ounces of fluid, growing from the left broad ligament; having crossed to the right side, spread out on its wall over the left ovary. November 18th: patient quite convalescent, and wound healed up.

LIVERPOOL MEDICAL INSTITUTION, November 16th, 1887.—Mr. PUZEY showed the lungs of a young woman, twenty-two years of age, who had recently died in the Northern Hospital from secondary sarcoma of those organs. The patient first came under his care last January, when she was suffering from myxomatous sarcoma recurring in the stump, after amputation at the knee-joint for sarcoma of the tibia in December, 1885. At that time (January, 1887) there was a suspicion of deposit in the upper part of the right lung; but to prolong life, and to give the patient a possible chance of recovery, amputation through the upper part of the thigh was performed. She made an excellent recovery, and remained well until September last, when symptoms of pneumonia set in, and soon it was evident that the disease was rapidly extending in the lung. Dyspnoea, effusion into the pleura, obstruction to the return of venous blood from the arm and right side of the head and neck, then distension of the superficial veins of the chest and back, and later on an extension of the symptoms to the other side of the chest marked the rapid progress of the disease, and the patient died on November 7th, after little more than six weeks of serious symptoms. The specimen showed all that was left of the lungs, *i.e.*, a small portion of the base of the right lung, and about two-thirds of the left lung. All the rest was converted into soft myxomatous growth, a great portion of which broke up in removal from the thorax. The other viscera were unaffected, and the stump resulting from the last amputation was perfectly sound and unaffected at the time of the patient's death.

Mr. BRIGGS showed tubes and ovaries infiltrated with granulation tissue removed from a patient æt. twenty-one, who had suffered from continuous pain, sufficiently accounted for by the pathological conditions.

Mr. BRIGGS also showed a dermoid cyst of the ovary, removed nine days previously. The clinical features of the case had been frequent hæmorrhages and great variations in the size of the tumour, which, however, was judged from its position to be ovarian.

Dr. BURTON showed an ovarian cystoma, weighing in recent state thirty lbs., which he had removed on Saturday fortnight. The tumour was firmly adhered in nearly its whole extent, separation from the omentum, abdominal wall and bladder being found necessary. The Fallopian tube was enlarged. No difficulty was experienced during the operation, although the pedicle was very thick; but it was followed by very extreme discharge, which necessitated the use of a drainage tube.

Dr. BURTON also showed a sarcoma of ovary, removed from a patient æt. fifty-one, who had suffered for years from dull, aching pain. On examination, a very firm, solid tumour was felt, which at first gave the impression of a uterine myoma, but proved to be unconnected with the uterus on further examination. The tumour was solid, with the exception of a small cyst (which had ruptured) at the lower part. It was the largest ovarian sarcoma Dr. Burton had seen.

Dr. J. M. HUNT narrated the following case, with the patient and diagrams:—M. M.—, factory girl, came under his care on September 19th, suffering from loss of voice of two and a half years' duration. Begun with hoarseness, rapidly passing into complete aphonia; believed to be due to exposure to cold and dust at her work. Voice had not altered during the past two years, though many remedies had been used. Examination showed three small, pale, warty growths, one springing from anterior commissure, and one from the middle of each vocal cord. Growths were pedunculated. No hyperæmia of vocal cords. Growths were removed in three sittings by Shrötter's tube forceps, and nitrate of silver was subsequently applied on three occasions. Result: restoration of voice perfect. Dr. Hunt said the case was chiefly interesting from the point of view of prognosis. The prognosis in cases of laryngeal tumours depends on—(1) Whether single or multiple. (2) The situation; if on or above the cords, the difficulty of removal renders the prognosis unfavourable. (3) The shape and depth of the larynx. If the epiglottis formed an acute angle with the cricoid cartilage, and the growth were situated in this angle, remo-

val would be proportionately difficult. A deeply-seated larynx is also unfavourable, as rendering operative interference difficult, but removal is easy in such a case as the one before the Society—that of a small woman with a superficial larynx. The cautery is often successfully employed in these difficult cases. (4) Size of the tumour, extremes in either direction being unfavourable; but even in cases which from their size present difficulty, a successful result might be obtained after the use of cocaine. (5) Present or past inflammatory action, with increase in size of the parts, rendered operative interference difficult. With regard to recurrence, some authorities have reflected on the propriety of attempting removal of apparently innocent growths on the ground that removal is likely to be followed by recurrence; but out of sixty-seven cases collected by Mackenzie, only four recurred. The usual estimate is that in about a third of the cases operated on recurrence at least once is met with. The chief cause of recurrence is imperfect removal. The nature of a tumour is, of course, a most important point to arrive at, as to whether malignant or innocent, and there is an impression prevailing that laryngeal growths are particularly liable to take on malignancy, especially if removal be attempted. On this point Dr. Symond collected 842 cases, out of which only two had been recorded as having been at first innocent, and having recurred as cancerous after removal; and out of 3,000 operated cases which he had been able to collect from every source, only six were recorded as taking on malignancy after operation. It is very difficult in early stages to diagnose the malignant nature of a laryngeal growth, and on this point clinical experience is a much safer guide than the examination of a piece of the tumour removed operatively or coughed up by the patient, for in the very early stages a warty growth, which will eventually become epithelioma, often shows no sign of epitheliomatous structure. Dr. Symond, after a very considerable experience, has impressed himself very strongly on this point, and has recorded an interesting case in illustration, in which there was a warty tumour on the vocal cord, which on removal proved to be epitheliomatous in one-third of its structure, and innocent in the rest of its extent. If a piece of the innocent portion of the tumour had been removed and examined microscopically, an erroneous diagnosis would have been made. Fortunately, in many cases the clinical history is very clear. A solitary warty growth occurring in a man over thirty-five, situated on the left side, and attended with aphonia or hoarseness (from absorption and pressure of enlarged glands on the recurrent laryngeal nerve), and in which the parts are much congested, is almost certain to be epitheliomatous, and rapid recurrence after removal will generally confirm the diagnosis. In such a case pain may be absent throughout, and the enlargement of the glands may pass unnoticed from their deep situation. With regard to microscopic examination of a laryngeal tumour, while on the one hand the revelation by the microscope of innocence, is not of much value as to prognosis; on the other, the discovery of malignancy is conclusive. Malignant growths are ten times as common in men as in women, and generally situated on the left side.

Card Specimen.—Dr. DAVIDSON showed two enlarged kidneys with double ureters from a case of emphysema and liver disease.

Dr. HOWIS read a paper on "The Weir Mitchell Treatment." He pointed out that while there are many nervous disorders in which a cure is only to be expected from feeding, fresh air, and exercise, the doctor is often disappointed to find that such treatment either fails to improve the condition of his patient, or even renders it worse than at first. There is evidently a gap to be filled up, and the Weir Mitchell treatment proposes to fill the gap. It is intended to prepare a patient suffering from nervous and muscular exhaustion for the following out of the air and exercise treatment which is to effect a cure. It may be compared to a break in a carriage journey, in order to feed and rest the horse and oil the wheels. The patients to whom the treatment is applicable are generally underfed and weak. They require powerful stimuli to movement, but when under the effect of such stimuli an abundance of muscular effort may be manifested for a very short time, as shown in certain cases of hysterical paralysis. The muscular movements called forth may be violent, almost amounting to a convulsion, but soon cease, owing to defective nervous and muscular power. Cases which usually pass as hysteria may be divided into four classes:—(1) Those in which ailment is altogether imaginary; (2) those in which, with some slight disorder present, imagination plays the most important part; (3) cases of distinct nervous derangement, aggravated by imagination; and (4) genuine cases of functional nervous disorder. These last, properly speaking, are not examples of hysteria at all, and it is in this last class of cases that the Weir Mitchell treatment proves so valuable. Of course, a too prolonged rest in bed may give rise to an imaginary disease, and it must be further noted that the Weir Mitchell treatment is not applicable to the case of a patient who can take abundance of open-air exercise without harm. In order that the treatment may be successful, it is of the utmost importance that the medical attendant shall acquire complete

control over his patient. She must cease for the time to have any will of her own, and be brought under the healthy influence of a hopeful mind. If the patient rebel, the doctor must conquer her—not by any harshness, or any forcing of her inclinations; but by kindness and firmness, and by showing her that he is completely convinced that by following his treatment she will recover. She should be told that she will get well, but only by taking abundance of food and exercise, and that the treatment enforced is merely to enable her to do this. Patients often rebel against the treatment so strongly that there is a danger of the doctor's losing his beneficial influence, but he must endeavour to separate himself from the treatment. The Weir Mitchell treatment consists in (1) rest in bed, (2) complete seclusion, (3) moral control, (4) over-feeding, and (5) massage, with perhaps (6) electricity as an adjunct. There had been a general impression that rest in bed tended to impair the appetite, and that was so in many cases; but Gull had found that in certain nerve cases the appetite was evidently improved by rest in bed. He employed rest and feeding without massage. There is a class of patients who suffer from nervous exhaustion, whose friends, seeing that they are easily affected by trifles, conclude that there is very little the matter with them; and these patients, tortured under exertion by the sting of imputed maligning, become worse and worse, and gradually drift into the condition of chronic invalids, until freed by their indisposition to take the rest which they require. After this rest has done its work, medical advice is again sought, and the open-air exercise ordered, and not previously feasible, seems now to effect a cure; for there is a period when the nervous exhaustion having been recovered from, muscular weakness alone remains, and this is relieved by exercise. Nerve tissue is much more easily exhausted than muscular, and as was pointed out by the president of the Medical Society, London, in his address to the Society, this is the reason why voluntary movements are so much more fatiguing than involuntary, as instanced by the heart compared with voluntary muscles, and another example of the same thing is the greater readiness with which fatigue is experienced by recruits at drill than by those who have acquired practice, and in whom the muscular movements brought into play are more or less involuntary.

Seclusion is necessary for two reasons—first, for the sake of quiet, as in these patients the sense of hearing is generally abnormally acute, and often painfully so; and secondly, in order to establish that moral control which is so essential. It is of no use attempting to trust these patients at their own home, but removal need not be to a great distance. It is a common observation how a person's appetite often improves when taking a meal away from home, even if the change is only to the next street or a few doors off. A great object in the treatment is to make the patient experience a continuous chain of agreeable sensations and the avoidance of nervous agitation. Great care should therefore be exercised in the choice of a nurse. If possible, one should be selected who is healthy, fairly strong, amiable, sympathetic, and yet capable of exercising firmness. Anything like fussiness in a nurse is to be condemned, but she should be able to anticipate the wants of the patient before they are expressed. The health of the nurse should be attended to, and she should absent herself from the sick room for a period every day, and take exercise in the open-air. The nurse should be such as to ensure inflexible rule with pleasant environment for the patient, for this is the essence of the Weir Mitchell treatment. A very full diet is required in order to store up material for future use. The appetite of patients undergoing the treatment increases in a very marked manner. Four healthy students who were subjected to the treatment consumed considerably more food and excreted more urea than when taking active exercise. Massage has been found useful in cases of obstinate neuralgia or myalgia, gastric catarrh, various forms of dyspepsia, in chronic joint diseases, and in chronic oedema of the leg. It consists in pinching, rubbing, rolling, and striking the muscles, and moving the joints freely, and should occupy an hour twice a day midway between meals. The treatment may extend over six or eight weeks, and then if the patient be strong enough she should be encouraged to take gradually-increasing open-air exercise, and walking, boating, driving, etc., should take the place of any social or literary avocation she may previously have been engaged in.—Mr. GEORGE WALKER said that massage was only another name for shampooing, which had long been recognized as useful in certain cases.—Dr. DICKENSON considered that the system had great merits, but was rather liable to degenerate into a fad. He referred to the fact that the experiment had been made of training some of the young women at the School for the Blind as masseuses. For this occupation their blindness did not unfit them, as it did for so many other occupations. Indeed, it had been a matter of observation that blind people were far more apt at learning it than sighted people.—Dr. BUOR doubted if nervous exhaustion was proved in these cases. The patients were mostly those who had never done a day's work. Isolation was required, not for the sake of avoiding efforts at hearing, as described by Dr. Henri, but in order to establish control over the patient. There

was a good deal of implied mystery as to the action of massage, but there need be none at all. The muscles should contain about one quarter of the blood of the body. The normal excretion of urea was about $\frac{1}{1000}$ of the body weight. Patients undergoing the Weir Mitchell excreted $\frac{1}{1000}$ of the body weight of urea, showing that their food is assimilated. Dr. Barr narrated the case of a hysterical patient who had been asleep for a fortnight, and on whom the Weir Mitchell treatment had been employed with great benefit. Dr. Barr condemned indiscriminate rubbing, and said that exercise should be strongly urged on patients for whom it has been employed.—Dr. CARTER, in correction of a statement made by Dr. Howis, said that Gull's original paper on "Apepsia Hysterica or Anorexia Neurosa" was published in 1868, but he had previously, in 1866, alluded to cases treated with benefit by rest in bed and full diet. Dr. Carter wished to know if the massage were really necessary as a part of the treatment. In several cases he had not been favourably impressed with massage. In one, that of a lady at Formby, it had been employed for a long time without benefit, and a lady living at Wrexham for whom it was ordered simply could not endure it. In those cases where massage could not be borne, Dr. Carter recommended the rest in bed and attention to diet, forming such important parts of the Weir Mitchell treatment.—Dr. DAVIDSON supposed that male hysterical patients (not the subjects of railway accident) would benefit by the treatment.—Dr. NEVINS, in the course of some observations, said that at present there were only two young women at the School for the Blind trained as masseuses. A woman must be strong to be able to undertake massage, and even a strong woman could not exceed three hours a day spent in rubbing.

Medical Miscellanea.

THE subject of our next illustration will be Dr. George Johnson.

Le Petit Medicin, Paris, No. 95, contains a likeness and brief memoir of Dr. Alexander Harkin, of Belfast.

The Apothecaries' Society of London have sent a petition to the Privy Council praying to be heard by Council in the matter of the petition sent in by the Colleges of Physicians and Surgeons, London.

We regret to announce the death of Sir George Burrows, Bart., F.R.S., M.D., Physician in Ordinary to the Queen. He was the eldest son of Mr. George Mann Burrows, and was born in 1801.

The illness of the Crown Prince still continues to excite great interest in medical and lay circles. Sir Morell Mackenzie's opinion on the case has been misrepresented; he still remains master of the situation.

Mr. Jonathan Hutchinson will give an address at the Annual Meeting of the Cardiff Medical Society, January 26th, "On the Modern Treatment of Obstruction of the Bowels."

We are asked to state that the minutes of the recent sitting of the General Medical Council, with the revised standing orders appended, are published by Messrs. Spottiswoode & Co., 54, Gracechurch Street, London, E.C., of whom copies can be obtained. Price 3s. 6d.

The Lettsomian Lectures will be delivered by Reginald Harrison, F.R.C.S., Surgeon to the Royal Infirmary, Liverpool; Lecturer on Clinical Surgery in the Victoria University, on January 2nd, 16th, and 30th, 1888, at 8-30 p.m., "On some points in the Surgery of the Urinary Organs."

Dr. Scanes Spicer has brought out an excellent form for systematically recording observations and results of treatment in affections of the throat and nose, including adjacent associated areas. Mr. H. K. Lewis, Gower-street, is the publisher.

A medical library and reading-room have been started in connection with the British Medical Association, Strand, London. Mr. Ernest Hart has made a good donation of books, as also have Messrs. Cassell and Co., and several medical publishers, and several medical men have presented copies of their works. Mr. Ernest Hart has been appointed hon. librarian. It is expected the premises will be open shortly after the new year.

We regret to state that Dr. Cross has been found guilty of murder, our regret being that he is a member of our profession.

Madame Boucicault, proprietress of the celebrated Bon Marché, Paris, has left ten million francs (£400,000) to the Assistance Publique for the foundation of another hospital in Paris.

Dr. Humphry Broomfield has been appointed Assistant-Physician to the City of Dublin Hospital. Dr. Bromfield is Lecturer on Anatomy in the Carmichael, and a well-known authority on his subject. He is also an able teacher.

L'Union Médicale gives the following receipt for getting rid of gnats, etc.:—Pour a small quantity of a two per cent. carbolic acid solution into a saucer, slip the fingers into the liquid and sprinkle all the bed linen with it, and the edges of the curtain next to the wall. The face and neck of the sleeper may also be sprinkled. No gnats or mosquitos will come near.

A congress of medical men and veterinary surgeons for the study of human and animal tuberculosis will be held in Paris in July, 1888, under the presidency of Prof. Chaveau; Prof. Villemin, vice-president. The questions which will be submitted for discussion are—1. The dangers arising from the use of the flesh or milk of tubercular animals, and the means of their prevention. 2. The aptitude of men and animals to tuberculosis. 3. The channels of propagation of the tubercular poison into the animal economy, and prophylactic measures. 4. The early diagnosis of tubercle in man and animals. Besides these there will come under consideration sundry other questions, e.g., heredity of tuberculosis in man and animals; contagiousness as from man to man, and reciprocally between man and animals; difference of tuberculosis in different animals; the study of the bacilli in various forms of tuberculosis, etc., etc.

In some courts of justice medical witnesses are treated with scant ceremony. Unfortunately the medical witness has no redress, because the advocate on the bench has supreme power, and cannot only silence, but punish—nay, he can even, from the shelter of his position, damage a professional reputation. A recent case reported in the Nottingham daily press illustrates the truth of this statement. Mr. Robert Brown Hogg, of Worksop, had to give evidence on oath before one of the judges in a case in which a man's leg had been broken. Mr. Hogg was evidently conscientious, and on cross-examination he stated his opinion that he did not think the fracture was caused by a kick, as he found no trace of bruises. He would expect to find something in the nature of a bruise where a man was injured by a kick; he was inclined rather to say the fracture was caused by a fall. A medical man in the witness-box has a right to express his opinion, and he must, when he gives his opinion, justify it. This Mr. Hogg did. We are therefore surprised to find that the judge who tried the case set up as a medical expert and sat in judgment upon the medical witness. "It appears," said His Lordship, "that the doctor had come there after he had taken a certain view of the case. He had made a ridiculous proposition in the box as to the cause of the fracture of the leg. He must mark his disapproval of his conduct by disallowing his expenses." Here the judge exceeded his duty. Mr. Hogg was a witness who had no interest either way, as it was a wretched dispute between two colliers. Mr. Hogg did not know the defendant before he saw him in the Police Court; but he did know the prosecutor, whose wife was a patient of his, so that if interests were concerned it would have been to Mr. Hogg's advantage to have taken sides with the prosecutor. The judge, on the evidence, set himself up as a scientific witness, and openly insulted Mr. Hogg besides punishing him. We must express our sympathy with our *compère*: unfortunately this is all we can do. This appears to us a case which should be taken up by the branch of the B.M.A., if Mr. Hogg belongs to one.

Correspondence, Notes, and Queries.

Communications, Books, etc., should be addressed directly to the EDITOR, "The Provincial Medical Journal," Horton House, Halifax.

Matters of business should be addressed to the Publisher, at the Offices, 10, Friar Lane, Leicester; or to the London Representative, Mr. E. BELLA, 58, Charing Cross Road, W.C., to whom all communications respecting Advertisements should be addressed.

We cannot undertake to return rejected MSS. unless stamps sufficient for their postage are enclosed.

We shall be glad to receive reports of Medical Vacancies, Appointments, Meetings of Societies, etc.

Papers containing passages for consideration should be marked.

Correspondents must please attest their communications with their proper name and address (not necessarily for publication).

Contributions must be written on one side only of the paper.

MSS. intended for publication to be sent in not later than the 16th of the month.

The insertion of any letter in these columns cannot be taken as necessarily indicating our adhesion to the views or statements therein expressed. The same remark applies to articles to which a name or nom-de-plume is attached.

LEICESTER AND SMALL-POX.


To the Editor of "The Provincial Medical Journal."

SIR,—As a contribution to the very important subject under discussion in your columns, may I offer a few brief observations? I do this as a medical practitioner of over thirty years' standing, during which time I have for many years held the position of public vaccinator. In my judgment the official statistics having reference to England and Wales, issued by the Registrar-General, demonstrates as plain as the sun at noon-day, not merely that vaccination is utterly inoperative to prevent or mitigate small-pox, but more, that since 1863 that disease has steadily and greatly increased in fatality, corresponding with increased diligence in the performance of vaccination, the unavoidable inference being (seeing that sanitation and medical treatment have made such great advances within the same period) that the operation is directly responsible for that result; and, further, that their official statistics derive full confirmation from my own experience, and I believe that inquiry would on the part of my professional brethren lead to similar conclusions on their part. I have been much impressed with the perusal of Dr. Charles Creighton's new book on "Cow-pox and Syphilis" (Cassell & Co.), which is probably the ablest, as it is the latest contribution of medical science to this much debated question.

Yours truly,

December 6th, 1887.

AN OLD MEDICAL PRACTITIONER.

 We would refer our correspondent to Dr. McVail's book, "Vaccination Vindicated."

"THE THROAT AND ITS DISEASES."

To the Editor of "The Provincial Medical Journal."

SIR,—Dr. Scanes Spicer's criticism on my book is on the whole so highly laudatory and the defects which he notices are of such minor importance that I should be indeed churlish were I dissatisfied, nor would I ask permission to contradict him on a matter of fact were it not one that involves, in my judgment, a most important point of practice with regard to intra-laryngeal operations. Dr. Spicer states that "the removal of many growths by snares and probangs as recommended by Mr. Lennox Browne is perfectly impracticable." I think he should have added, "in his own limited experience," or have alluded to the circumstance that I have reported in my book, a large number of cases (including every variety of growth that comes under observation of the specialist) all of which have been treated by those means and are attested by the names of well-known practitioners. He might further have quoted my statement that "since the foundation of the Central London Throat and Ear Hospital in March, 1874, neither I nor any of my colleagues present or past have ever used an unguarded instrument" for the removal of laryngeal neoplasms. My reviewer has also omitted to mention that the guarded instruments of Gibb, George Johnson, Voltolini, Stoerk, Jelenfy, etc., have all been used with success by their inventors, and by many others. I append a short corroborative note from my colleagues, and I am, Sir, yours faithfully.

LENNOX BROWNE.

We, the undersigned, colleagues of Mr. Lennox Browne, at the Central London Throat and Ear Hospital, are in a position to corroborate his statement that unguarded instruments for the removal of laryngeal growths have not been used at the Hospital during the period of our connection with it, as designated against our signatures. We further affirm that the same rule obtains in our own practice at this Institution.

ARTHUR W. ORWIN, 9 years.

J. DUNDAS GRANT, 10 years.

PERCY S. JAKINS, 5 years.

T. W. CARMALT JONES, 4½ years.

December 6th, 1887.

THE HEALTH OF WORKING MEN.

To the Editor of "The Provincial Medical Journal."

DEAR SIR,—The enclosed letter was received by me recently. It bears evidence of being written by a person with little early education, but with considerable power of thoughtful expression, as well as practical knowledge. The subject is one of pathetic interest to many workmen, and to all right-minded employers of labour. I should be glad if you will find room for it in your columns, printing it as written, merely suppressing name and address of writer.—Yours very truly,

Southport,

December 12th, 1887.

EDWARD DAY McNICOLL.

Stockport, November 22nd, 1887.

To Dr. McNicoll, F.R.C.S.

DEAR SIR,—Having read with interest your able article, entitled "Health saving in the industrial world," allow me to state that your suggestions appear to be feasible, and if carried out practically, would no doubt prove most beneficial.

But, Sir, it would be superfluous on my part to remind you that the corporal system may become so impaired to such an extent, as to render recuperation impossible. Such being the case, permit me to call your attention to what seems to be some of the primary causes that produce this sad result. I shall briefly confine my remarks within the limit of my own occupation—viz., the shuttle trade. The following illustration is a specimen of most of the shuttle workshops throughout the manufacturing districts.

In my present situation there are about twenty men engaged, who have to pass their time in a workshop comparatively small, and is very imperfectly ventilated. Not only so, there is a constant effusion of dry wood dust continually floating in the building. The wood used is chiefly of foreign import, some kinds are evidently injurious to the health, and causes inflammation in the eyes, so that they become swollen, and burn with intensity after one retires to rest. The wood that operates so are commonly known by the names of Membrella and West Indian boxwood. And from the months of October to February, twenty gaslights are used. These lights, together with the men's lungs, must inevitably consume in a very short time what oxygen is to be found in the building. The result is that most of the men are constantly troubled with headache, pains in the chest, and loss of appetite. It is imperative that shuttle wood should be thoroughly seasoned, and for that purpose about forty feet of steam pipes, three inch diameter, are arranged in a serpentine form in the centre of several workshops. The consequence is that the air becomes roasted, and deprived of its natural moisture.

Any intelligent person will see at once that it must be utterly impossible for human beings to secure "health, strength, and contentment" while labouring under such unfavourable conditions, for it would be just as reasonable to expect a stoker to raise a high pressure of steam in a boiler, from bad fuel, as for an employer to look for a maximum of labour from his hands, when they are deprived of the essential fuel necessary for the purpose—viz., fresh air.

It is a pleasure to know that there are a few employers of labour who study the well-being of their hands. Such employers are often rewarded by seeing a greater quantity of well-finished work executed in a shorter space of time than otherwise would have been. The reason of this is obvious, it is simply the result of observing the old proverb (though modified) which says, "That the righteous man hath mercy on his (beast) men, by granting them that which the God of nature intended for everyone to enjoy freely—viz., fresh air."

Many of the above workshops may justly be compared to the historic black-hole of Calcutta, or the hold of a slaveship; yet if one were to lay complaints to factory inspectors, and employers became cognisant of the fact, there are reasons to believe that a feeling of unpleasantness would be the result. Hence it follows as a matter of course, that the parties whose health is at stake, are under a social restraint, neither can they in any way counteract the evil, but are obliged by virtue of their position to remain silent.

Any ordinary student of physiology is conscious of the relation that exists between the heart and lungs and the atmospheric air, the which, if not pure, retards nutrition, corrupts the blood, and often proves fatal, "for the blood is the life." This fountain of the corporal system should by all means be kept as pure as possible. This, sir, in my humble opinion, appears to be the very first question that ought to arrest the attention of economists. First of all, let this indispensable and fundamental blessing, fresh air, be secured. Then, and only then, will a solid foundation be laid whereon to build up grit and fibre, both physical and mental, among our artisan classes, that will enable them to compete with all foreign countries.

Perhaps it would be well if some sort of chemical or optical instru-

ment could be constructed, and placed in every workshop, that would indicate the amount of foul air in such places, so that both employers and workmen may be instructed demonstratively on the subject, inasmuch as the great majority of them are totally ignorant on this most vital and important question.

These suggestions may not be feasible, but at all events it is to be hoped that someone, abler than myself, will shortly devise a final and practical remedy for the evil in question.

Professor Huxley recently remarked, that "experience and observation should form the basis of all human knowledge." Allow me to state that I, together with several others, have been labouring on these grounds to the best of our ability for over a quarter of a century, but have accomplished comparatively nothing. Knowledge on the subject is set at naught when it proceeds from the artisan classes—generally. It will require men of status and position to exercise their influence in the matter, or otherwise it is to be feared that this evil will continue to exist as usual.

The whole substance and burden of my plea may be summed up in the following sentence:—"That all workshops throughout the kingdom be limewashed periodically, and properly ventilated."

Possibly I may have laid my complaints in the wrong quarter, if so, I trust you will pardon me, but it was your welcome article that moved me to communicate to you for whenever any gentleman of your profession deals with the question at issue, it will be sure to meet with a warm response from those who hunger after health as the one thing needful, at least as far as this life is concerned.

In conclusion, I desire to thank you for your noble and humane effort, in attempting to solve this most important problem—viz., "Health saving in the industrial world."

SANITATION IN EGYPT.

To the Editor of "The Provincial Medical Journal."

SIR,—If a man thinks he sees in a branch of his own profession things which should be heeded and reformed, if there are insecurities in the foundations, or even cracks in the window panes; still more, if there is faithlessness or cowardice in any of her members, he is a friend if he speaks out. If he says nothing falsely, and nothing maliciously, he has done well; but if he is counted an enemy because he tells the truth, and if all the effort is to hush up the unwelcome facts, and delude both the world outside and the world inside, with the belief that all is well—that is, the acme of a diplomacy which is only a polite term for duplicity or dishonesty.

If I had shewn malignity in my writing I should certainly have chosen the *Bosphore* as my medium of publication, and no doubt it would have been very glad to have been so used. As it is, however, I never wrote anything for the *Bosphore*, nor have I ever caused anything to be written for that journal, my publications have been in English and American medical journals, a thing which should be observed for my *bona-fides*. Greene Pasha seems to think that my *bona-fides* can only be substantiated by my writing privately to him. Now, Mr. Editor, you can judge for yourself how Greene Pasha has treated my private communications to him. It is not very encouraging is it?

The *Bosphore* may be called an "Anglophobe" paper if you please, but it has published many disagreeable truths that were calculated to correct British wrong doing. Instead of that, however, it would seem that they only stirred up British ire.—Yours truly,

Cairo, December, 1887.

JAS. GRANT, M.D. (BEY.)

To the Editor of "The Provincial Medical Journal."

SIR,—I shall feel obliged by your publishing the following case and comments in your next issue:—

"Bleeding: a prompt remedy for congestive or inflammatory effusion combined with physical obstruction of natural passages." I adduce the following case as the basis of my argument. Mrs. H—, of K—, being in labour on April 20th, 1856, and attended by Mr. Hollinworth, surgeon, was found to have an arm presentation, and the vagina was so swollen that the cavity was blocked up. Mr. H. had sent for the aid of another surgeon—the late Mr. Bywater, Senr.—who gave it as his opinion that nothing could be done for such a case. He left and said they might send for me if they thought proper. I found the parts as described, with the foetal hand protruding beyond the vulva, and recommended immediate bleeding; twenty-four ounces of blood were taken from her arm at once, and a soothing draught given. We retired for fifteen minutes, and on re-examination I found the whole swelling had subsided, and the arm was partly retracted. The child was then easily turned and delivery followed within ten minutes, and the patient made a successful recovery. The reader may note that the bleeding acted fully in fifteen minutes, the entire swelling being then removed. Reasoning from analogy I do not see why the same powerful

remedy may not employed to remove effusion in other passages arising from tumours, etc., that have set up inflammatory consequences and so endangered life; surgical operations where reasonably practical will generally be adopted, but in doubtful or very difficult cases, such as the German Crown Prince's, surely such a remedy deserves a fair consideration. The question whether the tumour be malignant or non-malignant is not the only leading question, but another is whether the effusion consequent on irritation can be rapidly absorbed by the powerful effect of bleeding on the action of the absorbents, and whether, in the event of an operation being ultimately resorted to, the after-reactionary effects of such would be moderated rather than increased thereby to the benefit of the patient.—I am, Sir, yours truly,

Pontefract, December, 1887. GEO. P. ATKINSON, M.R.C.S., ETC.

Bibliographical Record.

BOOKS, PAMPHLETS, ETC., RECEIVED.

Index Catalogue of the Library of the Surgeon-General's Office, U.S. Army. Vol. iii. Legier-Medicine (Naval). Washington: Government Printing Office. Vaccination Vindicated. By John C. McVail, M.D. London: Cassell and Co. On Transfusion of Blood and Saline Fluids. By Chas. Egerton Jennings, F.R.C.S., M.S., M.B. Third edition. London: Baillière, Tindall and Cox. 1888. Le Colchique et la Colchicine. By Le Docteur J. V. Laborde et Houdé. Paris: G. Steinheil, 2, Rue Casimir Delavigne. 1887. Nasal Polypus, with Neuralgia, Hay Fever, and Asthma, in relation to Ethmoiditis. By Edward Woakes, M.D. Lond. (with illustrations). London: H. K. Lewis, 136, Gower-street.

PERIODICALS RECEIVED.

GERMAN:—

1. Centralblatt für Kinderheilkunde.
2. Centralblatt für Gynecologie.
3. Centralblatt für Chirurgie.
4. Illustrierte Monatschrift der Artzlichen Polytechnik.
5. Der Fortschritt.

FRENCH:—

6. L'Union Medicale.
7. Le Progrès Medical.
8. Bulletin Général de Thérapeutique.
9. Gazette de Gynecologie.
10. Gazette Hebdomadaire des Sciences Medicales.
11. Journal de L'Ouest.
12. Journal du Nord.

ITALIAN:—

13. Lo Sperimentale.
14. Rivista Italiana.

PORTUGUESE:—

15. A Medicina Contemporanea.

SPANISH:—

16. Rivista Clinica de Barcelona.

RUSSIAN:—

17. Vrach.

AMERICAN:—

18. The Journal of the American Medical Association.
19. International Journal of the Medical Sciences.
20. Medical Register (Philadelphia).
21. New York Medical Record.
22. Medical Record.
23. The Medical Bulletin (Philadelphia).
24. New England Medical Monthly.
25. Medical Times (Philadelphia).
26. The Polyclinic (Philadelphia).
27. The Analectic.
28. The Medical Standard (Chicago).
29. The St. Louis Medical and Surgical Journal.
30. The Denver Medical Journal.
31. Annals of Gynecology (Boston).
32. The Medical News.
33. The American Lancet.
34. The Medical and Surgical Reporter.
35. The American Druggist.

BRITISH:—

36. The Scientific Enquirer.
37. The Practitioner.
38. The Medical Chronicle.
39. The Medical Press and Circular.
40. The Journal of Microscopy and Natural Science.
41. The Indian Medical Gazette.
42. The Australasian Medical Gazette.
43. The Hospital Gazette.
44. The Journal of Rhinology.
45. The Birmingham Medical Review.
46. The Ophthalmic Review.
47. The Pharmaceutical Journal.
48. Public Opinion.
49. Health.
50. The Chemist and Druggist.
51. The British and Colonial Druggist.
52. The Australasian Journal of Pharmacy.

The above journals have been regularly received. We shall feel obliged if editors of British and foreign journals will notify whether their journals have been sent.

Copies of Index for 1887 may be obtained at office, 10, Friar Lane, Leicester.

THE
Provincial Medical Journal:

A MONTHLY REVIEW OF MEDICAL SCIENCE, LITERATURE, AND BIOGRAPHY.

VOL. VII.]

FEBRUARY 1, 1888.

[No. 74.]

Our Portrait Gallery.

GEORGE JOHNSON, M.D. F.R.S.

FEW members of the profession are better known, or have exercised a wider influence, than the subject of our sketch. George Johnson was born in November, 1818, at Goudhurst, in Kent. He was educated at the Goudhurst Grammar School, and at King's College, London, where he entered as a medical student in 1839. In 1843 he was appointed the first medical tutor at King's College, London. In 1850, when he resigned that office, he was elected an honorary Fellow of the college. In 1857 he was appointed Professor of Materia Medica; and in 1863 he succeeded the late Dr. George Budd as Professor of the Principles and Practice of Medicine. In 1876 he was appointed Professor of Clinical Medicine, with the office of Senior Physician of King's College Hospital. Having resigned these offices in 1886, he was elected by the Council, Emeritus Professor of Clinical Medicine, and Consulting Physician to the hospital. He is a graduate of London M.B., with the Scholarship for Physiology in 1842; M.D. in 1844. In 1862 he was elected a Fellow or Senator of the University of London; and in 1872 a Fellow of the Royal Society. In 1846 he became a Member of the College of Physicians; and in 1850, having been elected a Fellow, he was appointed to give the Gulstonian Lectures. In 1877 he delivered the Lumleian Lectures; and in 1882 the Harveian Oration. He has served in succession as Examiner in Medicine for the College Licence; as a Junior Censor; and lastly, a Senior Censor in 1875-76. In the usual period of two years, from 1884 to 1886, he was President of the Royal Medical and Chirurgical Society. Dr. Johnson has particularly distinguished himself by his researches and publications on diseases of the kidney, and he has thrown a flood of light on the pathological con-

ditions associated with Bright's disease. His methods of detecting albumen and sugar in the urine are generally adopted by the profession; and in the various controversies which have arisen regarding the pathological significance of albumen and sugar, he has ably defended his own views.

We may here mention, *en passant*, his discovery that in testing for sugar, urine, which darkened from the presence of liquor potassæ on the addition of picric acid, assumed a deep port wine colour, almost black; whilst normal urine gives, with picric acid and potash, a dark red colour. Picric acid has played a useful role in urine testing.

Dr. Johnson has recently published a volume of "Medical Lectures and Essays," of which he says in the preface: "In bringing together, and carefully revising, some of my published writings relating to subjects which I have been led to investigate with more than ordinary care and diligence, my main object has been to communicate to the profession my latest and most matured opinions on such interesting and much debated questions as, for instance, 'The Pathology and Treatment of Cholera;' and of the 'Various Forms of Bright's Disease of the Kidneys;' 'The Relation of Membranous Croup and Diphtheria;' 'The Proximate cause of Epileptiform Convulsions,' etc."

A library of medical works cannot be considered complete without some of the writings of Dr. Johnson. We particularly recommend his treatise on "Diseases of the Kidney" as a book which will be found useful and interesting to the general practitioner.

Independent of various articles contributed to the various medical journals, his chief public works have been the following:—"On Diseases of the Kidney," 1852; "Epidemic Diarrhœa and Cholera," 1855; "The Laryngoscope: Directions for its Use, and Practical Illustrations of its Value," 1864; "Notes on Cholera," 1866; "Lectures on Bright's Disease," 1873.

Original Communications.

ON A NEW METHOD OF TREATING SKIN DISEASES LOCALLY.

By H. VALENTINE KNAGGS, M.R.C.S., L.R.C.P.

III.

A NON-IRRITATING EMULSION OF RESIN OR OIL IS THE BEST SUBSTITUTE FOR ANIMAL PLASMA.

WHEN we consider the methods adopted by nature for the purpose of healing wounds and injuries in animal and vegetable structures, we notice a decided similarity between the two kingdoms.

In animals the continued circulation of the blood in the vessels of the body is an essential concomitant of life.¹ The osmotic flow of the sap is equally necessary to the fructification and well-being of all vegetables. The fluid which we term the blood is in many respects akin to the sap circulating in vegetable structures. On exuding, they both, to a greater or less degree, possess the power of coagulation or inspissation. When poured out in this manner such fluids perform precisely similar functions. A further loss of vital constituents is prevented. Injured surfaces are protected, and temporarily covered up in order that healing may take place.

If, further, we enter into the composition of these various fluids, the similarity of the manner in which their component parts are, in the main, built up, will also be noticeable. For instance, when an animal tissue is wounded, a flow of blood usually occurs. This subsequently gives place to a clear liquid or plasma, which consists of blood deprived of its corpuscles, and contains within it in a state of solution the substances which, on exposure to the air, induce coagulation. The plasma, apart from the living body, is composed of, amongst other things, two essential constituents—namely, fibrin, which may be said to form the analogue of the oil or resin of the vegetable kingdom, inasmuch as it is insoluble in water; and serum-albumin, the counterpart of the vegetable albumen or gum, since it is soluble in water. The circulating sap of the vegetable is often composed of ingredients, which, when extracted from the plant, and allowed to harden, are insoluble in water. During the period of growth they are thinned down, and dissolved by the watery fluids, and other constituents derived from the atmosphere and the earth upon which the vitality of the plant is sustained.

The amount of fibrin constituents found in the blood are known to vary in individuals, and in different species of animals. They may be present in greater quantity than usual, or may be almost absent. Considerable variation is compatible with a condition of vigorous health. Pregnancy and certain forms of disease frequently exert a marked influence in increasing or diminishing the proportion of these constituents. In the vegetable kingdom oily and

resinous bodies are likewise found in connection with the sap of living plants. With respect to their formation, a considerable degree of fluctuation manifests itself in different species or genera of plants of even in the same species. Indeed, these bodies may be almost entirely absent, or may preponderate in one part of a plant and not in another. In some instances, such as the coniferæ, the resinous substances are stored up in very considerable quantities. In other varieties the watery fluids, and substances soluble in water, are in excess.

The gum-resin is, so to speak, the ideal type of the plasma of the vegetable. It often exudes in a state of nature from any diseased or weak point in the cortical layers of the plant. Injuries or incisions give rise to a similar flow of sap. This vegetable compound in the matter of its composition exhibits a decided analogy to the blood. We have the resin in the place of the fibrin, and the gum as a substitute for the serum-albumin. It is a curious fact, however, that the generality of natural gum-resins are acrid and irritating. As a consequence, they can only be used for preparing embrocations, or for stimulating indolent sores, and are unsuited to the treatment of inflammatory skin diseases.

When water is added to a gum-resin, the gum becomes dissolved, and serves to suspend the resin in a finely-divided state. A natural emulsion is thus formed. *Mistura ammoniaci* is an instance in point. Where, however, an uncombined resin or oil is added to water, or to mucilage, complete emulsification does not occur. It is consequently necessary to resort to artificial means to effect the combination. The best method to pursue for this purpose consists in amalgamating a gum in the dry and powdered condition with the resin or oil, prior to the addition of the water. By selecting a suitable oil or unirritating resin we can properly emulsify it with a vegetable gum and water, so that the particles are minutely and permanently subdivided, as in the natural emulsion. An emulsified combination of this kind resembles a freshly exuded gum-resin; is perfectly bland and unirritating; and is, to my mind, the best vegetable substitute for the plasma of the blood.

The so-called mineral fat probably approaches more nearly to the type of an unirritating resin than any other. It is not unreasonable to suppose that these fats were originally derived from the terebinthinous and resinous exudations of the primitive coniferæ of the coal period. By a mellowing process of age and mineralisation they were no doubt transformed from their original condition into the paraffin oils from which such fats are extracted. Experience would tend to confirm this. When used to prepare artificial gum-resins, soft mineral fats in practice give far better and more uniform results than other fats when employed in the form of these preparations.

A comparison of the formula of the emulsion basis, referred to in a previous article, with the composition of blood plasma, may serve to illustrate the analogy between the two compounds.

PLASMA.	EMULSION BASIS.
Substances insoluble in water.	
Fibrinogen Fibrinoplastin	} fibrin. Soft paraffine, 1oz.
Substances soluble in water.	
Serum-albumin	Gum acacia, gr. 160
Chlorides, Sulphates, and other salts	Boric acid, gr. 16
Water	Water, 1oz.

¹ Emulsions occur extensively throughout the animal kingdom. Life, in fact, is carried on in great measure by means of their action. Even the blood itself, the very essence of animal existence, is practically an emulsion, in which, it seems to me, the hæmoglobin, and other ingredients contained in the corpuscles, are suspended in a watery serous fluid through the medium of an enveloping layer of fibrin. The component parts of fibrin, fibrinogen, and fibrinoplastin are in their turn suspended in the albuminous serum. Again, *milk*, a typical emulsion of the mechanical type, is the normal nutrient of mammal progeny. Further, were it not for the saponifying action of the pancreatic and biliary secretions, no food of a fatty nature could possibly find its way into the system through the *chyle*.



Wm. W. F. H. H.
George J. H. H.

In many forms of cutaneous disease the natural healing fluids of the body are apt to become temporarily incapable of properly performing their normal functions. They are not equal to the necessary effort required for the purpose of throwing off the complaint. The affected parts are continually exposed to the atmosphere. Troublesome irritation, with tendency to scratching; foetid or irritating secretions; the presence of irritant substances incidental to the pursuit of many occupations, and other causes, are also liable to further impede the curative action of these coagulative exudations.

It must be our part in such cases to assist enfeebled nature by artificially supplementing her healing forces.

OCCLUSION OF COMMON GALL DUCT, AND DIFFICULTIES IN DIAGNOSING CAUSE OF OBSTRUCTION.

BY ANDREW SCOTT MYRTLE, M.D.

THE recollection of Dr. Ord's most interesting address on "Rarer Symptoms produced by Gall-Stones," tempts me to lay before your readers some remarkable cases of the above common affection, in order to show how difficult it is, nay, how impossible in many cases, for even the most experienced in hepatic disorders to arrive at an exact diagnosis as to its cause.

The first symptom of occlusion is pain about neck of gall bladder; this may be a dull ache, and constant, or sudden and severe, spasmodic. Whatever its character, jaundice quickly follows, and this again may be so slight as almost to escape notice, except on most careful examination, when a few patches of the skin of the face may be seen yellowish, with a similar tinging of the conjunctivæ; or it may be so pronounced that the surface of the whole body is deeply bronzed, and the subject has the appearance of a Red Indian. The excreta may offer the same minor and major indications of the presence of bile; in the milder cases the symptoms may disappear as rapidly as they came; but in the more severe forms they are frequently most persistent and recurrent. In these latter I find gall-stones are most generally accepted as affording a ready and reasonable explanation of the symptoms; and it is only after having failed to discover any concretions of a solid or semi-solid nature in the fæces of the great majority of such patients, on the most careful examination by washing and sifting, that I have been led to the conclusion that gall-stones are by no means the usual cause of obstruction of the gall duct, and that in ninety per cent. the duct is closed by inflammation of its mucous membrane, just as the nostrils are thoroughly occluded in nasal catarrh. When we consider how effectually the comparatively wide canal of the nose is completely rendered impervious to the passage of air, when its lining membrane is inflamed, we can all the more readily understand how the bile is prevented passing through its narrow channel when it is like affected. I have stated that at the commencement of each attack pain more or less intense is experienced, but should the stomach contain food, it is also thrown into spasm of the most violent kind, which nothing in the way of stimulants, carminatives, or opiates will allay; nothing short of complete evacuation of its contents will afford relief, and, I may add, *en passant*, the quickest and best way of effecting this is to administer a large dose of common mustard in a tumbler of hot water. Here I may also add that in all cases of jaundice it is my invariable rule

to inspect the excreta at each visit, and the fæces are washed and passed through a hair sieve after every attack of hepatic colic.

CASE 1.—The late Dr. Pagan, of Glasgow, sent Mr. M——, æt. sixty, of marked gouty habit, suffering from severe and persistent jaundice. Dr. Pagan pronounced for gall-stones. M—— was losing flesh rapidly; his attacks of spasms were intense, ushered in by severe rigors, followed by high fever, and an increase of bile in urine; fæces white. This had continued for six weeks before he came to me; when spasms passed off there was no fulness, no tenderness to be felt at right hypochondrium, even on deep pressure. For a fortnight he got worse and weaker, so I sent him to London; there he was seen by one of the most eminent physicians. A few days after his arrival Mr. M—— was so ill as to require almost constant medical attendance day and night; and the consultant wrote me saying the case was one of cancer, and he was sending him home to die. He went home, and an old friend hearing this, called on him and said to him, "You have been given up by your doctors; we have an auld wife in our village who gives a drink that cures jaundice; were I you I'd send for her." She was sent for, administered her drench, and in three hours afterwards Mr. M—— had the worst spasm ever experienced, almost dying; but when it passed he felt better than he had ever done; asked for solid food; took it with relish. Shortly after that he had a large motion, and on examination a single gall-stone the size of a small pigeon's egg was found. He made a rapid recovery, and for years after he came to Harrogate on account of gout, and many a laugh we had at the fallacies of the faculty and the auld wife's drench.

CASE 2.—Admiral K——, æt. fifty-eight, was sent to me by Dr. K——, of London; he had been seen by three other leading physicians, and several provincial. Symptoms: jaundice, anorexia, emaciation, and diarrhœa; stools offensive, clay coloured; urine like porter. A tumour the size and shape of gall-bladder was seen and felt under the hand; this gave the impression of a bag of small marbles; it was slightly movable, and painful. For sixteen months he had frequent and severe attacks of hepatic colic, requiring hypodermic injections of morphia. All agreed the case was one of gall-stones, and ordered him to Harrogate, as he was too weak to think of Carlsbad. On arrival he could manage to crawl from his Bath chair to my study. I put him on the old sulphur water, and strong sulphur baths. He improved daily as regards digestion and strength, but the diarrhœa and jaundice remained, and so did the tumour. In six weeks he had gained 22lbs. in weight, and could walk eight miles a day with comfort; had no return of colic; felt so fit, determined to go to Scotland for shooting. The night before starting he was seized with terrible spasm, relieved by hypodermic injections of morphia. Dr. K—— had written to the effect that he and his *confrères* had agreed that should another severe spasm, endangering life, occur, cholecystomy should be at once performed, and to this he consented. Dr. Lawson Tait came. On examination, he said, I agree with what all your doctors have said: your gall-bladder is full of stones; they can only be removed by an operation; the chances are 1,000 to 1 in favour of gall-stones; still it is just possible it may be something else, so we shall make an exploratory examination first; if gall-stones, we shall remove them; if anything else, you will be no worse than you were before. This was done. Cancer

of pancreas, involving the gall-duct; wound was closed, and in thirty-six hours the patient died from passive hæmorrhage.

CASE 3.—Mrs. H—— was sent to me by a neighbouring physician. In his letter he said, "The case is one of gall-duct, and should you deem an operation necessary for their removal, I wish you to send her home." She had suffered from hepatic colic for some time, but had not been jaundiced. Her tongue was white, flabby; skin dry and dirty; sickness, acidity, flatulence, constipation; urine loaded with urates, scanty; great tenderness over whole epigastrium and right hypochondrium; slightest pressure caused retching and vomiting. I took a different view of this case from my friend, diagnosing gastric duodenal catarrh, involving common gall-duct; treated her accordingly, and in three weeks she went home fairly well. She has had repeated attacks of the same kind since, for which she has been successfully treated at home.

CASE 4.—Mrs. C——, æt. 32, was sent to me by Dr. D., of London, suffering very much from similar symptoms to Case 3, but infinitely worse. Her attacks of colic were so frequent and severe, she always kept a bottle of morphia by her, in order that she might at once apply to it. On arrival she was so exhausted I had to order her to bed. Next morning I found her jaundiced, greatly emaciated, pain over gall-bladder, nausea constant, with thirst; gall-stones had been carefully looked for, but never found. I at once suspected the symptoms arose from the same cause as No. 3 and acted on the same lines, which were mild sulphur water hot, in aperient doses before breakfast, with strong sulphur baths at 100° Fahr. every second day. After the third week I put this patient on the saline chalybeate springs, and in six weeks she left well. This patient had been suffering for a year or more before coming to Harrogate, and she has never required any treatment since "September, 1886."

CASE 5.—Mr. A——, æt. 62, of very gouty habit, after suffering from flying gouty pains was seized with intense pain over the caput cæcum; this was accompanied with great prostration and sickness, pain continued for some days, and on the appearance of gout in the knees left him. Six months after this he was attacked with severe spasms in the common gall duct, with all the usual symptoms of gall-stones; jaundice followed; motions examined; no trace of any concretion. For twelve months the slightest error in diet, exposure to cold, or mental worry brought back the spasms with jaundice. He felt almost certain that he had gall-stones, and went to London, where he was treated by "kneading," as recommended by Dr. George Harley, with great benefit, but without discovery of any biliary concretions. In this case I suspect gout to have been the cause of spasms in both the colon and gall duct.

CASE 6.—Miss J——, æt. fifty, had felt out of sorts for months. When I saw her first she complained of various dyspeptic symptoms and a dull aching pain in her right shoulder; she could not bear the pressure of her clothes round her waist; tongue red, raw, and glazed in centre; bowels confined; motions natural in appearance; urine loaded. Everything I tried proved useless. I called in an eminent consultant, who candidly confessed he could not make the case out at all. Miss J—— went on for weeks much in the same way, getting weaker and weaker, her symptoms continuing to puzzle us both. One morning on my arrival her nurse said, "I want to show you something before you see your patient." She produced a brown rough gall-stone, which she had found in a loose motion passed

after a more severe attack of pain in the right shoulder than usual; the concretion was about the size of a small horse bean, and from its surface evidently solitary; from that date all symptoms quickly vanished, and perfect health restored. The peculiar features here were the absence of pain in the gall-bladder and duct, the free discharge of bile, and the presence of those symptoms we find invariably indicative of inflammation of mucous membrane of upper intestinal tract. I introduce this case in order to show that we may have a gall-stone, or any number of them, and yet find no spasm of duct, no occlusion, and not one of the usual symptoms which are generally present, at all events, during the passage of such a large concretion through the common gall-duct.

(To be continued.)

ON SOME POINTS IN THE PATHOLOGY AND TREATMENT OF LACERATIONS OF THE CERVIX UTERI.

By THOS. MORE MADDEN, M.D., F.R.C.S.E.,

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ELSEWHERE, and more especially in America, the pathology and treatment of lacerations of the cervix uteri have received an amount of consideration which would appear exaggerated were this to be merely measured by the scanty attention yet generally accorded to this subject by British gynæcologists. Thus five years ago, when I read a paper on "Hystero-Tracheloraphy" before the Dublin Obstetrical Society, the very name of that operation, or the circumstances under which it would be required, had never been previously alluded to in the *Transactions* of the premier British Obstetrical Association, and to the present day this topic receives far less attention in these countries than it is entitled to. Moreover, although Dr. Emmett, in the last edition of his classic work on "Gynæcology," has kindly expressed his approval of my views as to the frequency and importance of the obstetric complications arising from cervical laceration, still neither this point nor the advantages which I believe are obtainable from amputation of the mutilated and hypertrophied cervix over tracheloraphy in certain cases of stellar and extensive bilateral laceration are, I think, sufficiently recognised by either British or American practitioners. It is obvious, that the prevalence of these injuries can in nowise be affected by any racial or climatic differences on the opposite shores of the Atlantic, whilst as regards their treatment, any method of practice found effectual in New York or Boston should, *cæteris paribus*, have similar results in London or Dublin. Hence, I now venture to submit the result of my clinical observation on these and other points connected with this subject to the judgment of other gynæcologists.

In the present communication I shall in the first place, refer to the increasing frequency of cervical laceration in recent practice, and to the causes assignable for this; secondly, I shall point out the various parturient and puerperal troubles which are consequent on these lesions; and, lastly, I shall briefly recapitulate my clinical experience of the treatment of this accident, and more particularly in reference to the utility of amputation of the cervix in cases of extensive bilateral and stellar lacerations. The latter, when met with, as is often the case in a state of

chronic hypertrophic disease, cannot, I believe, be effectually remedied by hystero-tracheloraphy, and if uncured, may result in life-long misery, even when not eventuating in cancer of the cervix. Such cases, I contend, require and may generally be successfully treated by the amputation of the mutilated and diseased cervix uteri.

With regard to the frequency and pathological importance of cervical lacerations generally, my views are entirely in accord with those of Dr. Emmett—namely, that their importance cannot be exaggerated, since at least half the ailments amongst those who have borne children are to be attributed to lacerations of the cervix. Cervical lacerations are unquestionably now more commonly met with than was the case in my earlier experience some ten or twelve years ago. This fact is probably ascribable to the larger proportion of assisted deliveries in recent midwifery practice, and, above all, to the employment of the unnecessarily powerful axis traction forceps now resorted to, in many cases prematurely, or before the sufficient natural dilatation of the os uteri. Be the cause what it may, however, of the increasing frequency of cervical lacerations, as observed in recent gynaecological practice, there can be no question. Thus in my hospital I have of late years noticed that the majority of child-bearing patients who present themselves for uterine examination are found to have sustained some degree of cervical laceration, varying from a mere fissuring of the os to the most extensive stellate laceration of the cervix. Even the former must be regarded as a condition of some immediate pathological importance; whilst the latter lesion is of still greater consequences in its secondary results, and its reparative treatment is often followed by the complete subsidence of chronic pelvic complaints, formerly misinterpreted and ascribed to other morbid conditions or displacements of the uterus.

Before referring to the secondary consequences of cervical lacerations, we may allude to the primary or more immediate effect of these accidents. The effect on subsequent delivery of cicatrices resulting from cervical lacerations is a matter of practical interest, these being of more frequent cause of tedious labours than is commonly supposed. In my own practice I have on several occasions, in instances of rigidity of the os thus produced, been obliged to incise the os before delivery would be accomplished, and at the present time I have a case of complete uterine occlusion, due to this cause, under treatment in my hospital. In this connection it may, perhaps, be of some interest to observe that, although, until recently, completely ignored by successive generations of obstetric practitioners, the frequency of cervical lacerations, as well as their effect in causing difficulty in subsequent parturition from rigidity of the os uteri, may be found explicitly pointed out by writers so far back as the middle of the seventeenth century, when this was described by Mauriceau in his "*Maladies des Femmes Grosses*," and in England by the younger Chamberlen, who, in his translations of Mauriceau's work, refers to the frequency of "unnatural deliveries from a strong cicatrix, which cannot be mollified, caused by a preceding ulcer or a rupture of a former bad labour—so agglutinated, it must be separated with a fit instrument, lest another laceration happen in a new place, and so leave the woman in a worse condition than before."¹ And even a century later we find in Smellie's "*Cases in Midwifery*," "lacerations of the cervix uteri are frequently alluded to as the

cause of rigidity of the os, and, consequently, protracted labour in multiparous patients."²

Cervical laceration is an occasional starting-point of ruptures extending through the upper portion of the vesico-vaginal septum, and more especially of vesico-uterine fistulæ, and in almost every instance of this kind that has come under my observation the cervical laceration and the extension to the vesical septum was consequent on instrumental delivery. Laceration of the cervix uteri, whether from the premature use of the forceps in the first stage of labour, or from precipitate natural delivery, is moreover a subject of considerable obstetric interest as one of the causes of flooding. I have elsewhere drawn attention to cases of *post-partum* hæmorrhage thus occasioned, of which I have now met with many instances. And I may repeat that "there is reason to anticipate that, when the practice recently advocated of applying the forceps before the natural dilatation of the os uteri becomes generally adopted, as seems likely to be the case, the next generation of midwifery practitioners will thenceforth have an ampler opportunity of witnessing this accident than was the case in the practice of their possibly slower, but certainly safer, predecessors in the obstetric art." For although some authorities hold that the duration of labour, rather than the method of delivery, is the chief factor in the causation of fissurings of the os and cervix, it seems quite evident that no natural dilatation, however rapid, can be so liable to occasion rupture of the circular fibre of the os and cervix as its forcible manual extension, in efforts to complete delivery, by version or the forceps. Some years ago I brought cases before the Dublin Obstetrical Society, in which I had been called in consultation, where the cervix had been thus torn through by the abuse of the double-curved midwifery forceps. The same accident have I seen from version, where the hand was forced rather than insinuated into the uterine cavity before the full dilatation of the os, and have also been consulted when similar consequences had followed undue manual violence in the removal of a retained placenta. In many cases of this kind I have traced hæmorrhage after delivery to its source in the injured vessels of a lacerated cervix. Long since this form of hæmorrhage was described by Gooch, although he failed to recognise its true cause, which was then of far less frequent occurrence than at present. For in Gooch's day natural delivery was the general rule, and accoucheurs had not yet been taught that patient reliance on nature's powers, in cases of unobstructed and uncomplicated labour, might be replaced by hasty operative interference and unjustifiably violent mechanical force.

The special liability to cervical injuries under these circumstances is self-evident, and their physical evidences are obvious to the veriest tyro who has the opportunity of examining the tapering, nipple-shaped neck of the sterile uterus, slightly projecting into the vagina, its apex intersected by a small transverse dimple, or marked by a minute circular depression—the os externum, and then contrasting it with a hypertrophied, truncated, fissured, or lacerated cervix. In the latter we find the results of the lesion in question, in the irregularly gaping mouth, semi-concealed by a glairy, or muco-purulent discharge, through which the everted endo-cervical mucous membrane may be seen extruding in so many of our child-bearing patients, and too often the result of the injudicious use of the needlessly powerful axis-traction forceps now in vogue. In a medico-legal

¹"The Diseases of Women with Child and in Childbed." By Francis Mauriceau. Translated and enlarged by Hugh Chamberlen, M.D. p. 197. London: 1672.

²"Cases in Midwifery." By William Smellie, M.D. Vol. iii, p. 64. London: 1752.

aspect, and especially as a proof of previous delivery, cervical laceration is therefore of unquestionable importance, since by no other circumstances can the evidences of this injury be produced. On the other hand, the non-existence of such cicatrices or fissures is no proof of non-delivery, as the fissuring may have been so slight as to heal within the puerperal period, leaving no obvious traces of the injury.

The connection between laceration of the cervix uteri and many of the chronic disorders of women formerly exclusively ascribed to idiopathic sub-acute inflammation of the uterus, and especially to congestion or ulceration of the cervix, has been clearly established. In such cases the lining mucous membrane is forced down through the gaping edges of the rent as soon as the patient rises from the lying-in bed, giving rise to cervical ectropium. This extended membrane is a focus of irritation, spreading upwards and causing endo-cervicitis, the edges of the rent becoming the seat of erosion, or chronic follicular ulceration; the hardened cicatricial tissue around the rent, after some time, assuming a distinctive character and becoming a veritable neoplasm. A more immediate result of bilateral cervical ulceration is sub-involution of the uterus, which, as well as pelvic cellulitis, may in many, if not in most cases, be ascribed to this cause. In the first instance the inflammation, extending upwards from a cervical wound to the body and fundus uteri, effectually arrests the natural process of involution. In the latter it spreads along the ligaments, giving rise to para-metritis and salpingitis, or reaches the ovaries, thus causing ovaritis or para-ovaritis.

As a cause of uterine flexions and displacements cervical lacerations are of considerable pathological interest, for if the resulting cellulitis so affects either of the suspensory ligaments as to cause its thickening and shortening, the uterus will thereby be thrown out of its normal position, and a constant strain and sense of wearing pelvic pain must be occasioned. These symptoms can only be relieved by relaxing that tension, either by restoring the inflamed ligament to its normal condition, which is next to impossible, or, more easily by taking of the dragging uterine weight by a properly adjusted pessary. Hence the benefit experienced from mechanical support in many cases of chronic pelvic pain, which is more often consequent on cervical laceration than from any primary displacement of the uterus. In the majority of instances the direction of the fissure is antro-posterior, and it may extend through both walls of the cervix, or, as is more commonly the case, be limited to its anterior aspect. When thus situated these fissures, if superficial, often occasion very little trouble, and in many such cases they become healed without any special care during convalescence after delivery. But when from the abuse of instruments, or manual dilatation of the os, to expedite delivery, or from the removal of a retained placenta, or from the unusual size of the child, or from any other circumstance the cervix is extensively lacerated, either bilaterally or split into a number of sections by multiple or stellar laceration, then the results of the accident obviously become far more serious, leading as they must to one or the other of the pathological conditions just described. Under these circumstances, as a rule, surgical treatment—viz., either hystero-tracheloraphy or amputation of the cervix will be necessary. The value of the former, and the procedure by which it may be accomplished, are so familiar, that any reference to this operation would here be more than superfluous. My present object is, however, to call attention to the fact, on which I have elsewhere dwelt—namely, that hystero-tracheloraphy is by no means invariably applicable in cases of cervical laceration,

occasionally failing even under apparently favourable circumstances, and that in some instances we may best treat the long train of symptoms consequent on the injuries by the amputation of the lacerated cervix.

This view is not in accordance with Dr. Emmett's opinions; but though none can more fully recognise Dr. Emmett's authority on the subject, which he has made so peculiarly his own, yet I cannot agree with him that amputation of cervix, except for malignant disease, is necessarily malpractice. The removal of the neck of the uterus for so-called hypertrophy or for abnormal elongation, is also deprecated by Dr. Emmett, who, moreover, is equally opposed to the application of the cautery or of caustics to heal a so-called ulceration on surfaces that may possibly be brought into a healthy condition and united by his operation. If in Dr. Emmett's words, this so-called ulceration, or this elongated cervix, should prove to be merely a laceration, the sides of which can be brought together and united so that the integrity of the parts will be as perfect as if the accident had never occurred, then to resort to amputation is malpractice. This proposition is self-evident. But in the little *if* lies the entire question; and highly as I value hystero-tracheloraphy, and successful as I have generally found it in appropriate cases, I must repeat that in certain cases of extensive stellate lacerations of long standing, with considerable loss of substance, and accompanied with chronic inflammatory conditions of the adjacent structures, or cellulitis, as well as with hypertrophy or hyperplasia of the injured cervix, caused by inflammatory exudations, rather than by any development of the normal cervical connective tissue, tracheloraphy is inapplicable and useless. In such a case we can only cure a patient who is otherwise incurable by the amputation of the mutilated and diseased cervix. Moreover, this operation, according to my experience, is fully justifiable in some cases of non-traumatic hyperplasia, and chronic parenchymatous cervicitis, especially in patients who are hereditarily predisposed to malignant disease, as well as in some instances of cancer of the cervix, either as a curative measure in its earliest stages, or to relieve suffering, if not to prolong life, in the latter stage of the same disease. Finally although in most of the cases of laceration in which I have removed the cervix, the patients have so far remained sterile since then; on the other hand there can be no doubt that this operation is nevertheless called for in some cases of sterility, resulting from the mechanical obstacle to impregnation offered by a greatly hypertrophied, elongated, and conical cervix uteri. Within the last five years I have, for the foregoing reasons, amputated the cervix in a considerable number of cases. I may observe—and my friend, Dr. Hugh Kenneday, who assisted me in nearly all my earlier cases in the hospital and in private practice, confirms the statement—that, so far at least, we have had no experience of the disastrous consequences which some writers insist on ascribing to this operation. I must, however, add that in rather more than half of these cases the patients from whom the cervix was ablated have not since borne children.

THE GENERAL PRACTICAL USES OF ELECTRICITY IN MEDICINE AND SURGERY.

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It is not my intention to write a paper on electricity as a physical force, or to explain its physiological action. These subjects are dealt with at length in many excellent works on physics and physiology, and also form the contents of valuable

introductory chapters to many of our works on electro-therapeutics. The object I have in view is to present in a practical form the uses to which electricity may be applied in medicine and surgery. It is necessary that reference should be made to some general principles of the subject, and to some of the instruments employed, in order that the descriptions given may be intelligible.

All medical men should possess some knowledge of the medical applications of electricity to enable them to form an opinion as to its value and suitability in the treatment of any cases that may come before them, and also for the purpose of drawing conclusions of any value from the reports of electrical examinations. The batteries to be described may be taken as typical of those in use. The number in the market is very considerable, each of them possessing their own peculiar advantage; in none can every advantage be combined. No less than four or five differently constructed batteries are required to carry out the different modes of treatment and uses to which electricity is put as an adjunct and help in the science and practice of medicine. The difficulties connected with the investigation and treatment of disease by electricity are so great and numerous, that its employment falls of necessity to the lot of specialists. It is impossible for medical men in active general practice to give the time, or afford the money, or possess the manual dexterity necessary for carrying out electrical treatment in all its branches, but a general knowledge should be possessed of how it is used, and in what affections its use is advantageous, and a medical man should be in a position to explain intelligibly to his patients the form of electricity he may advise, and the results likely to be obtained from its use.

The electrical department at St. Bartholomew's Hospital has cost, for its batteries and electrical appliances alone, several hundred pounds, and there is a continual and considerable outlay involved in keeping them all in working order. In addition to some such unavoidable outlay, there is the expenditure of valuable time. The public as a rule will not pay sufficiently high fees to medical men to in any way recompense them for the time which would be occupied in electrical treatment, even if the hard work they have to perform would enable them to give it.

The subject of electricity was first reduced to science by a medical man, viz., Dr. Wm. Gilbert, of Colchester, Physician in Ordinary to Queen Elizabeth. He wrote in 1600, "*Tractatus de Magnete*," and to him we owe the word "electricity." He called all bodies that manifest the same attractive powers as amber (*ἡλεκτρον*) when rubbed "electrics." The word electricity was soon afterwards introduced to indicate the power that electrics possess. Dr. Gilbert does not seem to have applied electricity in any way to medicine, but he will always be looked upon as a pioneer in the investigation of one of the greatest forces in nature. Dr. Gilbert is thus immortalised by Dryden²:—

"Gilbert shall live till loadstones cease to draw,
Or British fleets the boundless ocean awe."

The real inventor of the electric telegraph, as we at present use it, was also a medical man—a Mr. Davy who recently died in Australia. It is said that he when House Surgeon to St. Bartholomew's Hospital first transmitted a message by means of a wire from one part of the hospital to another.

¹ A copy of this work is now in the Library of the Royal College of Physicians of London.

² Dryden's "Epistle to Dr. Charleton."

Neither does it seem that Mr. Davy employed electricity in any way in medicine.

It was more than a hundred years after the time of Gilbert that electricity was first extensively used as a curative agent. Jallabert in France, and De Haën in Germany, were among the first to apply the electric frictional machine to medicine in the early part of last century. In this country it chiefly remained in the hands of non-professional men. In 1759 the famous divine, the Rev. John Wesley, collected most of the recorded cases in which electricity had been used, and published them in a treatise entitled "*The Desideratum; or Electricity made Plain and Useful. By a Lover of Mankind and Common Sense.*" Among the first (if not actually the first) treatise published by an English medical man upon the employment of electricity in medicine was written in Latin² by Dr. Robert Steavenson, of Newcastle-on-Tyne, for some years Physician to the Newcastle-on-Tyne Infirmary, and great uncle to the author of this article. Eight years later (1786), than the date of the above mentioned treatise, Galvani made his wonderful discovery of the continuous current, and in 1831 Faraday discovered the secret of induction which has since provided us with the interrupted current.

Duchenne, of Boulogne, was the great apostle of faradism. To him we owe the enunciation of the truth that for curative effects it is necessary that the current should be localised, that is, applied directly to the parts it is wished to influence. Duchenne found that muscle could be more easily excited at certain points, which he called "*points d'élection*." These points were afterwards proved to be the positions where the motor nerve entered the muscle, or for deep muscles where the supplying nerve approached nearest the skin, and could therefore be more easily excited. These positions are now called "the motor points," and are depicted in most of our works on nervous diseases.

Electro-diagnosis.—Until the last ten or twelve years electricity has been employed by medical men in this country chiefly as an aid to diagnosis. The most useful work on electrical diagnosis is written by Dr. Hughes Bennett,³ Assistant Physician to Westminster Hospital. For the carrying out of investigations as to the electrical excitability of muscles two batteries are necessary; a continuous current battery of about twenty to thirty cells, and a faradic or interrupted current battery. The continuous current battery ought to be provided with some arrangement, such as, what is called, a *dial collector*, by which additional cells may be gradually added to and included in, the circuit, and it ought to have a *commutator*, or mechanical arrangement, for reversing the direction of the current. It is also necessary that a *galvanometer* should be employed, either attached to the battery or independent of it, but included in the circuit, by which the current strength we employ can be gauged. It is only by the aid of this instrument that we can be sure that the same current strength has been used to produce the same reactions in muscles which we may wish to compare. We cannot tell this by the number of cells it is found necessary to employ to produce contractions in corresponding muscles of opposite limbs, because the resistance in the respective

¹ This treatise was republished by Messrs. Baillière, Tindall and Cox, London, 1871.

² "*Dissertatio Medica Inauguralis, de Electricitate et Operatione ejus in Morbis Curandis.*" Robertus Steavenson, A.M., Britannus; Edinburgi, mdccclxxviii.

³ "*A Practical Treatise on Electro-Diagnosis.*" H. K. Lewis, London, 1882.

limbs may vary. This is often the case in a diseased limb as compared with a healthy one. No means has yet been devised for measuring the interrupted current; we must therefore compare contractions produced by its agency with those produced on a corresponding muscle in a healthy subject. The operator should always graduate the interrupted current by the strength which will produce a contraction in one of his own muscles. The most useful muscles for this purpose are those composing the ball of the thumb. Experience gained from the frequent habit of making electrical examinations will teach an operator what corresponding current ought to produce a contraction in any particular muscle that has to be tested. The strength of current given by each faradic battery also varies, so that when using an unknown battery it is the more essential that an operator should first test its effects on his own muscles. Every faradic battery should be provided with a *rheostat*, an arrangement for regulating the current either by introducing into, or removing from, the circuit more resistance; or by exposing more or less of the coil of wire to the influence of induction. The best forms of faradic batteries now in use are those in which the inducing current is obtained from one or two galvanic cells. Nearly all faradic batteries possess two coils—a primary and a secondary. In the primary coil the battery current is multiplied and augmented by the number of turns of wire in the coil, each turn of the wire acting inductively on that which is next to it. The secondary current is a purely induced one, and its strength depends upon the amount of the secondary coil which is allowed to cover over and encircle the primary one. For testing the contractile power of muscle, the primary coil is the best as the secondary produces a current of higher tension (or possessing a greater electro-motive force), and is therefore more painful; but the secondary current is the best for testing electro-sensibility.

For the use of both batteries, continuous and interrupted, it is necessary to have *reophores*, or conducting cords from the battery to the patient. And at the ends of the reophores, for the purpose of applying the current to the patient, it is necessary to have instruments of various sizes and shapes called *electrodes*. These different parts and accessories of batteries that I have mentioned are also used, and will again be mentioned in recounting the therapeutical applications of electricity, but they need not again be explained.

The chief use of electricity in diagnosis is to help in distinguishing cerebral from spinal or peripheral lesions. The current from a constant battery always flows from the positive to the negative pole, and is called a descending current. When the polarity of the electrodes is reversed, for the purposes of diagnosis, it is assumed that the current flows in the reverse direction, and is then called an ascending current. The positive pole is called the *anode*, and the negative the *kathode*. In the reactions of healthy muscle to the continuous current a stronger contraction is produced on closing a descending current than on closing an ascending current; or in other words a stronger contraction is produced in a muscle when the electrode applied to it is negative than when it is positive—*i.e.*, a cathodal closure contraction is stronger than an anodal closure contraction. This is expressed by the formula $C.C.C. > A.C.C.$ The reverse of this reaction is called the "reaction of degeneration," and as far as electrical diagnosis is concerned it is the chief point that can be elicited by the use of the continuous current. In some affections the galvanic irritability of nerves and muscles

is increased, but the reactions may be qualitatively normal. The normal polar reactions of nerves occur in the following order:

C.C.C.	Cathodal closure contraction.
A.O.C.	Anodal opening contraction.
A.C.C.	Anodal closing contraction.
C.O.C.	Cathodal opening contraction.

In the human subject where it is impossible to operate on the exposed nerve the A.C.C. and A.O.C. are about the same in force. The chief practical fact worthy to be noted is that *in health* the C.C.C. exceeds the A.C.C., and the A.O.C. the C.O.C.¹ In the early stages of some paralyses the galvanic irritability is very often increased. This is not so marked after the direct division of nerves, as has been recently shown by Mr. Bowlby, in his lectures last year on "Injuries of Nerves," delivered before the Royal College of Surgeons.² When a muscle is made to contract by electricity independently of nerve excitation the contraction is very slow and wavy as compared to a contraction caused by the same stimulus acting through a nerve.

The interrupted current is more useful in electro-diagnosis. When interruptions take place more frequently than ten times in a second a tonic contraction of healthy muscle is produced provided a current is used of sufficient strength. When the motor cells at the origin of the nerves, or the nerves themselves, are impaired or destroyed, then the faradic contractility of the muscles is modified or lost.

For the continuous current a pad should be placed on an indifferent part of the body, and the electrode applied to the muscle, the condition of which it is required to ascertain, should be made alternately negative and positive by means of a commutator and the contractions produced compared. Then the contractions produced on the affected limb should be compared with those produced on the healthy side, or if both limbs are affected a current registering two milliamperes on a galvanometer ought to produce a contraction. The average resistance offered by the human body, under these circumstances, may be taken to be about 1000 ohms. The resistance of individuals varies considerably, chiefly due to the condition of the skin. More cells will be required with one individual to register two milliamperes on a galvanometer than with another. For all practical purposes the resistance of corresponding limbs in the same individual may be taken as equal, although this is not always the case. If a very accurate examination and report is required it is first necessary to ascertain the relative resistances of the two limbs. This can be ascertained by the help of a galvanometer. If twelve cells of a battery applied to a limb will make a galvanometer register two milliamperes, and the same number of cells from the same battery applied to the corresponding limb does not register so much, there is a difference in resistance—the latter limb offering an increased resistance. In examining for faradic contractility it is best to remove the pad from the indifferent part of the body and attach another smaller-surfaced electrode with a handle to the reophore. If the pad is retained on an indifferent part of the body an interrupted current is so diffused, and so many muscles are thrown into a state of contraction, that no reliable diagnostic information can be obtained. Therefore it is best to apply one electrode to the trunk of a nerve and the other to the individual muscles that the branches of that nerve supply. When it is wanted only to influence the skin, in testing the electro-sensibility of a part, one moist

¹ Hughes Bennett.

² *Vide Lancet*, June 4, 1887, p. 1123.

electrode should be placed on an indifferent part of the body, and the other, a dry one, such as a metallic brush, should be applied lightly to the part to be tested, the skin also being allowed to remain dry.

Galvanism.—The same batteries as are used for diagnostic purposes may be employed for the treatment of many affections that can be relieved by galvanism or faradism. In the use of galvanism for treatment two methods are followed—one the “stable,” in which both electrodes are kept perfectly stationary, the current passing evenly between the two points; the other, the “mobile,” in which one electrode, usually the negative one, is moved over the limb or part it is wished to influence. In both cases the skin over which the electrodes are applied should be previously moistened with salt water. The best form of electrodes are carbon or metal discs covered with chamois leather. The old brass tubes for holding sponges are inconvenient, and can be kept clean with difficulty. Verdigris forms inside them, which offers a greatly-increased resistance to the current. In both methods of administering galvanism it is often convenient to have one electrode placed on an indifferent part of the body. The best electrode for this purpose is an oval plate of pliable metal, such as tin, with a layer of amadou, to retain moisture, stitched on to it, and the whole enclosed in a loose cover of washleather, or flannel, having a waterproof back to protect the patient's clothes. When galvanising the arms this plate electrode can be slipped beneath the collar to the back of the neck, and when the legs are treated it can be placed under the lower part of the dorsal spine and the patient allowed to lie upon it. The greatest chemical and thermal action takes place about the negative electrode, and that is why it is usually chosen as the movable one.

What is called “central galvanisation” consists in applying the negative electrode in succession to the chief nervous centres—viz., to the brain, spinal cord, and sympathetic in the neck; the other electrode being placed on the epigastrium, or some other remote part of the body. This method of electrification is generally employed when it is sought to influence the whole nervous system, as in states of great nervous depression, or exhaustion after long illnesses, or in cases of nervous insomnia. Other special affections are treated by galvanism—such as neuralgia—which are often better relieved by applying the positive pole to the painful area. On the other hand sciatica is more successfully treated by the negative pole,¹ and the current used as strong as the patient can bear it—that is, about ten to twelve milliamperes.

Faradism.—Faradism does not produce the physiological changes which are so characteristic of the constant current, and is generally not so useful as a therapeutic agent. Its greatest use is found in certain forms of paralysis. It helps to exercise the muscles, and thus maintain and promote their nutrition during the time that recovery may be taking place at the origin of the disease. In some forms of neuralgia also it is found more effective than galvanism. When it relieves pain in this way it is most likely due to the production of nerve vibrations. When used for the treatment of general conditions of the system it is either employed in the electric bath or in a way which is called “general faradisation.” In this manner of administering the interrupted current one electrode may be placed on an indifferent part of the body, or the feet placed on a metallic

plate, and the whole surface of the body sponged with the other electrode.

Static Electricity.—In the early applications of electricity to medicine static electricity was the only form used because it was the only form known. For many years after the discoveries of Galvani and Faraday static electricity still remained in exclusive possession of the field of electro-therapeutics. In the Guy's Hospital Reports are several lists of cases of chorea, amenorrhœa, hysterical contractions of muscles, etc., etc., which were successfully treated by this method. The cases are reported by Addison,¹ Golding Bird,² and Sir Wm. Gull,³ who at different times had charge of the Electrical Department at Guy's Hospital. The method of application is the same now as it was when Dr. Steavenson, of Newcastle-on Tyne, wrote on medical electricity in 1778, and is fully described in his work.⁴

The number of accessories required, the expense and cumbersome nature of the machines used and the unpleasant shocks employed in some forms of its administration have prevented frictional electricity from ever becoming a fashionable or frequently-employed agent in the treatment of disease. Its use has of late years been revived, especially by Charcôt, of Paris, and no doubt it is the most useful form of electricity in the treatment of some affections, especially those which are hysterical. No electrical department of a hospital would be complete without a room, or a sufficient amount of space devoted to its use. Static electricity in the form of “the positive charge” has been found useful in general debilitated conditions of the system, such as old age, debility during convalescence from acute illnesses, confinement, or excessive lactation, general prostration from anxiety and over-work, many mental states accompanied by a depressed condition of the system, such as some forms of hysteria, menacholia, and nervous insomnia; and I hope to be able to prove its utility in the treatment of spasmodic asthma.⁵ The reverse, that is a charge of negative electricity, has on several occasions induced an attack of the disease.

(To be continued.)

NOTES ON CONTINUITY IN DISEASE.

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WE must seek to coördinate the phenomena of disease with pathological structure, with vito-chemical processes, and with function; but pathological structure is very much a dead stage; function, in its perturbations, is the great study of the physician in practice; whilst vito-chemical process seems to be the medium or basis, both of pathological structure and disturbed function. In viewing vito-chemical changes within the body, we must never forget that the organism correlates with the “modes” of all the “energies” around, in which it exists, and of which it is, indeed, a part; and that the organism, when viewed from the deductive Form of evolution, has involvements and correlations, with and of existences, which may justly be called infinite. Though we may fail in our

¹ Guy's Hospital Reports, 1837, No. 2.

² *Ibid.*, 1841.

³ *Ibid.*, 1852-53.

⁴ Reprinted by J. and A. Churchill, London, 1884. “Electricity and its Manner of Working in the Treatment of Disease.”

⁵ *Vide* “Electricity and its Manners of Working in the Treatment of Disease.” J. and A. Churchill, London, 1884, p. 38.

¹ *Lancet*, January 19th, 1884, and July 17th, 1886.

efforts to survey the field of biology—indeed, we know that we *must* fail—in its normal rates or processes of evolution or health; and though we must still more fail to analyse and state the rates and processes of disease—though viewing disease always as in continuity of process and rate with health—yet we have reached an elevation from which we perceive that a grand “unity of method” pervades all the sciences, including medicine. It may be of value to state certain inductive, and even deductive truths, in relation to method in medicine:—

First, a generic type pervades the great fever group, from the equator to high latitudes. We all recognise the differences of the three agues, of typhoid and typhus, of remittent and “vomito” or yellow fever, of cholera and remittent fever in Bengal, of herpes and ague, of asthma and ague, just as we recognise the differences of the languages and dialects of Europe. Not the less, we recognise that a grand generic type must pervade these different diseases, just as a generic type pervades those different languages. And this unity of method, applied to such generic type, would cover not only the field of symptoms, but also it would indicate a grand *general* class of vito-chemical processes, as fundamental in all the varieties. To use the analogy of language yet further—we hold that language is still in process of evolution, that the forms of language now prevailing are not fixed, but are changing with, and subject to, mental conditions and outer environment. And we similarly hold that the fevers of different latitudes, though apparently so different in symptoms and aspect, must have a generic type in their profounder nature, and that a nearly allied vito-chemistry must pervade them all.¹

Further, this generic type is not only seen in what we commonly call the “fever” group, but it is often seen that the “inflammatory” group of diseases show the type of the fever group—*e.g.*, we know of epidemic pleurisy, epidemic pneumonia, epidemic dysentery, epidemic cynanche tonsillaris, etc., etc.; and we often see cases which we cannot classify either as lung cases or fever, and we often see fever which we cannot group under any strict definition or name. And further, we see downright fevers follow and arise from chill, or from mere *change* of environment—arising under the same conditions as simple inflammations arise. I have seen two cases of what could not be called other than scarlatina in the course of an epidemic of measles, in an isolated community, when respectively six and eleven weeks at sea. Thus when we take a justly wide view of fevers, of inflammations, or of those “travelling instances,” the border-land cases, which we cannot classify as fever or as inflammation, we are led to look for a generic type of vito-chemical change in the protoplasm, and in its varied differentiations in the organism.

We have, in our constant and necessary dependence on the varied and different organs and functions of the body,

¹The chemist, in studying the phenomena of the inorganic world, is ever being drawn toward wide, general laws. The hope of generalisation is his inspiration. All chemistry and physics tend to open to our minds widely pervading and common laws. The philosophy and method of chemistry, the inspiring revelation of bonds of union and of general truths, are as absolute an existence to the true chemist as are the matters and bodies with which he experiments. And equally to the physiologist and pathologist, the grand vito-chemical laws which dominate, and are one with, the cellular organic evolutions, must have as great or greater place in biological philosophy than have material structural changes and processes, however minute. The cellular physiology and pathology are less ultimate than are the wider truths of dynamic vito-chemistry, and the absolute continuity of inorganic and organic.

in the necessary division of our labour, and in the exigencies of practice, perhaps too much looked on the body as made up of different organs and distinct parts; but we have to remember, from a large biological point of view, that the body is one organ and being, that the fundamental energy and functions of protoplasm pervade all organs and parts of the body. The differentiations of function and structure are minor parts of the greater common Form of energy and matter, becoming life. Thus many different “diseases” which our classification necessarily recognises must have a pervading common Form—*e.g.*, we see individuals, species, and genera of plants and animals, all somewhat different, but yet more grandly allied; the universal laws or Forms of biological energy pervade them all. We see the energy of creation still evolving in certain cell forms or polarities of the male and female individuals. We see this universal Form of fecundity, not only in the phenomena of the continuance of the species, but in the minor circles of the disturbances of growth and process—*viz.*, in disease—*e.g.*, infectivity develops at times in the states of system known as fever, cholera; more markedly so in other cases, as in syphilis, anthrax, etc. Thus a fundamental motion or energy of infectivity is apt to evolve in a great variety of the tissues and processes of the animal body. We, of course, follow Darwin, that fecundity does not belong alone to the sexual organs, but to each ultimate “gemmule” even. Thus, in a very important sense, we have to recognise that the body is one organ, and that general laws are common to, and pervade, many different diseases. This has long been recognised; and further, this great general truth of continuity seems now to be perceived, as pervading all the phenomena of nature. The phenomena of heat and pyrexia, and their variations, when viewed in correlation with the Form of the correlation of the modes of matter, establish the absolute continuity of the inorganic and organic, and place the laws of pyrexia, as phenomena of disease, within the domain of exact vito-chemistry. Assuming this as a deductive law, we are prepared to approach pyrexia—whether in its extremes, as in tetanus and rheumatism, or in its other more moderate developments—by a method which has reached the light in other sciences. Nor are we to be debarred from such hypothetical approaches because the entire revelation of the laws of the continuity of the inorganic and organic does not yet appear. It is no small step in method when we have reached the perception that pyrexia, and many diseases, must be viewed as in continuity with the modes and correlations of universal matter and energy, rather than as so many distinct entities. This larger view of the science of medicine must enlarge and more firmly establish the art of medicine.

We thus perceive that diseases are disturbances of the prevailing harmonious correlations and equilibrium of the vast series of actions involved in life. Life, as seen in the organic, has a period of evolution of coördinate and equal duration with the cosmos itself; life exists in the so-far ultimate energy, and disease can have no less wide correlations. Thus it happens that the smallest changes—often the smallest alterations in the molecular (isomeric or allotropic) states of vital composition and compounds—may disturb those correlated and harmonious modes on which health depends. The changes so induced must obey orderly laws, equally as do all other inorganic chemical changes. Further, it is impossible but that some one great general law must prevail, say in the great fever group. In physics and dynamic chemistry an infinite variety

of facts and phenomena have been brought within the same great laws. As an example of groups of phenomena, which, separated as they are to common observation, yet show, from a wide biological view, a continuity, I may cite the *præ-mortem* evolution of molecular modes of organic radicals, the "poisons" of tetanus, when that disease follows simple wounds; of cholera, in its great varieties of degree, and resulting from mere change of place, or change of season, sudden rains, or shock; of yellow fever, when at periodic intervals it shows in the unacclimatised, from the shock of joy or fear, or from the shock of passing a catheter, etc.; of fever, like to typhoid, showing in new comers in varied climates, when they are subjected to change of environment; of cynanche tonsillaris, when epidemic in young people, when they *change* their environment from the southern tropics to higher west-wind south latitudes; of outbreaks of herpes, when changing latitudes in voyages; of epidemics of mumps, when changing latitudes, after having been many weeks at sea. In the above instances of the evolution of well-marked "different diseases," I think that philosophic method and analogy justifies the hypothesis that the *præ-mortem* changed modes or poisons, which preceded or precipitated all the variety of the "different diseases," must have been of one generic type; that the operation of one law or order grandly pervaded all. As the protoplasm of the body is ever undergoing the most active changes, and as it is ever dying, ever passing into more stable, less vital, organic radicals, I see a continuity of law and order between such *præ-mortem* and the well-known *post-mortem* modes or "poisons." All of us have probably recognised the familiar *post-mortem* odour of the breath in old people in varied illnesses.¹ We recognise generic "types" in the vegetable and animal kingdoms—it is true, not absolute, for nothing seems absolutely fixed to sufficiently wide observation of the times and order of nature, when we view the paleontological series, or when we submit our minds to the method of evolution. These types are a greater part of the Form of any genera than are the differences of species, however highly these latter may be individualised; and so in diseases, and in their vito-chemical evolution and process, we may fairly expect a generic type, be the resultant different diseases ever so clearly marked. The hypothesis of one great type of vito-chemical change, as the mode of protoplasmic deviation in so many different diseases of the fever group, is not only in analogy with chemical and biological methods, but it is further an approximative explanation of the border-land cases, which though we call them "fever," cannot be classed under any specific name, and of that other border-land group, which cannot be classed either as fever or congestion of the lungs.

From a wide biological view, and applying the hypothesis of continuity as a deductive truth, the molecular states of the normal secretions of some animals—such as the salivary secretion of snakes, and the normal poisons of other animals—establish the fact that the appearance of molecular modes of poisons in protoplasm, is a natural and

inevitable law of the great Form of the evolution of life. The hypothesis of continuity will further regard the existence of the vegetable poisons, strychnine, opium, oil of almonds, etc., etc., not as fortuitous, not as teleological, but as the result of conditions nearly related to those which precipitate within the system modes or poisons, which are followed by tetanus, coma, cholera, etc. Nor can one avoid remarking that many of our deviations, both of growth and function, have correlation with the molecular modes of inorganic bodies and of organic radicals. Hardly a growth or a function but which has its continuity in the cosmic evolution, with molecular the modes of mineral or organic bodies—*e.g.*, that opium has correlation with the function, and energy, and modes of cerebral cell-contents, shows an alliance in the series of the fundamental evolution, and that the same mode of molecular energy or motion exists in both. As already remarked, a large proportion of our mental powers, most of the senses and animal passions, many of the functions and even growths, all find in the organic kingdoms, both vegetable and animal, bodies (molecular states of organic compounds) having a very near capacity for correlation or transmutation into such different modes of brain-cell or mind, or of other of the varied functions of the body. Such facts are nothing but the record of the unity of method of the entire evolution. Our therapeutics, therefore, are but the early empirical approaches to a vast law of continuity in evolution—a law of continuity from the inorganic and vegetable to the highest differentiations of the highest animals. Such a law of continuity must embrace vito-chemical action, and involve the varied modes of the correlations of energy. Our therapeutics thus becomes the highest of all scientific studies, being based on the widest laws, and embracing all the manifestations and Forms of matter and energy.

I have cited the example of strychnine as producing tetanus, and that of tetanus following a simple wound. Here, in the latter case, we may hypothetically surmise that the wound has led to a devolution of the highly differentiated vital animal compounds into more stable alkaloids, having molecular powers like to the vegetable evolution, strychnia. Time would coördinate the prevailing organic plasma to the modes of the new devolution or poison, but in the meantime the patient dies of the terrible convulsions of respiratory and cardiac action. Or take the example of cholera, in those instances where the patients are struck down as with a blow, in the earlier stages of some epidemics—the pulse is gone, the heart ceases to beat. How like to the results of some of the cyanogen series! We hypothetically reason that compound-radicals—nearly isomeric or allotropic with the cyanogen series—have evolved out of protoplasm. The compounds of the living body having reached an age or stage of unstable equilibrium, the smallest changes in environment are enough to lead to the devolution of the highly-differentiated normal organic compounds into more stable earlier forms—organic poisons—related to the cyanogen series, and cholera has thus its evolution or autogeny.² There can be no chance or accident in the facts of the existence of strychnine in the vegetable world, and

¹ I remember an old lady of eighty, of tough constitution, but with an old-standing winter cough. I was called in the evening, and found her very low, with hardly power to bring up the phlegm, and her breath had the smell of a corpse. She was a violent teetotaler, and said she would not take any alcohol. I, however, went out, and returned with a bottle of Gilby's best port, and made her drink two wineglassfuls at once. The next morning, the *post-mortem* smell was gone. She scolded me, but confessed that she was better. She lived three years after. It is not unreasonable to think that *præ-mortem* "poisons" were in process of evolution, that actual death was beginning, and that the alcohol arrested the devolution and death.

² "The cyanogen compounds may be considered as derivatives of ammonia." "The cyanogen compounds are remarkable for forming series of polymeric modifications." "Hydrocyanic acid has . . . been obtained by the direct union (without condensation) of nitrogen and acetylene, when a series of electric sparks is passed through a mixture of these gases" ("Roscoe's Elementary Chemistry," p. 349).

"Ammonium cyanite . . . undergoes gradually, at ordinary temperatures, and at once at 100°, a remarkable molecular change, becoming urea" (*Op. cit.*, p. 353).

of its nearly allied isomeric or molecular evolution in protoplasm after wounds. The law of continuity compels us to acknowledge that vegetable and animal protoplasm are of one series, and though they be sometimes so greatly differentiated, they are not the less results of the same continuity of energy. We all acknowledge the allied nature of vegetable and animal tissues in normal growth, and it is *à priori* certain that the deviations of protoplasm and structure in the two kingdoms, will sometimes pass into compounds and courses common to both, natural overlappings or reversions in the great evolution.

Again, taking cholera as an example, the auto-genetic theory explains the sporadic, and the periods of intervals of epidemics. The outbreak is so far explained, by the hypothesis, that the human race, under allied conditions of climate, has necessarily allied, general tendencies to changes in its protoplasm. The milder type of epidemics at their close show that the periodic tendency to change in any race has been pretty much exhausted in the earlier outbreak. Therapeutics also confirms the hypothesis, for few can doubt that the cholera pill of Indian bazaars, and other medicines—opium, alcohol, etc.—have often arrested the full evolution of cholera.

It seems impossible but that we hold the opinion that our present classification of disease—say of fever—is too defined. In nature, what we call the different fevers, however distinctive and specific they may be, in certain instances merge into border-land types; and even some of the usually distinctive inflammations not unfrequently show with the distinct type of fever, and even acquire the motion or energy of infectivity. And this is true, not only when viewing disease as it appears in different latitudes, but also in viewing disease in the same latitude in different epidemics and seasons, and in different individuals. Even already, chemistry presents us with an approximate hypothesis, as coördinate with and explaining such observations on the merging of types of disease. The vegeto-alkaloids, say of opium, have a nearly identical composition; they re-act chemically like ammonia, but their difference of action on the living body varies out of all seeming proportion to their differences of chemical composition. Or again, many essential oils are isomers of turpentine ("Roscoe," *Op. cit.*, p. 396), yet their influence in the living system varies vastly. Thus chemistry presents us with organic compounds nearly isomeric, but with the most marked differences in their correlations with animal function; and yet these marked differences, in other instances, present most delicate gradations in their relation to function. In the present state of our practical observations of disease, and of our knowledge of isomeric and molecular chemistry, it seems legitimate to hold the hypothesis of the continuity of disease with health; and that this continuity is seen in the autogeny or evolution of "poisons," often isomeric, but molecularly different from the prevailing modes of organic plasma. As examples, I have cited the evolution of cholera from a great variety of changes, and tetanus as evolving from the changed modes of organic plasma, following simple wounds.

The molecular condition of bodies is deeply related to their therapeutic powers. Even organic compound-radicals can take the place of mineral elements in bodies. "The carbon atoms, however, not only unite with each other in large numbers, but form groups of great stability, which in organic compounds take the place of the elementary radicals of the mineral kingdom" ("Cooke's New Chemistry," eighth edition, p. 333). The molecular therapeutic

powers of such must correspondingly vary. As an illustration of the great differences in properties which molecular changes effect in isomeric bodies, Cooke says (*Op. cit.*, p. 339): "The aldehydes . . . have very striking and characteristic qualities, and these qualities may be, to a great extent, traced to their peculiar molecular structure. If we only make so small a change as to transfer the oxygen atom from the terminal to one of the central atoms of the carbon nucleus, we obtain a class of compounds which, though isomeric with the aldehydes, have wholly different qualities, and are called ketones." Such facts in the nature of the powers—including therapeutic powers—of molecular constitution in isomeric organic bodies, if further viewed in relation to the vast number and variety of bodies which are formed from isomeric carbon groups, will prepare our minds to expect the evolution of compounds from the tissues and protoplasm of animals; and in so exquisitely balanced, and even infinitely changing processes, ever happening in the organism, it seems almost like an *à priori* truth, that these new compounds shall be at times inharmonious in mode, even to the degree of being fatal "poisons." I can never doubt that at recurrent periods, chill, and various other changes in environment, have led to the evolution of cholera and varied well-defined fevers, just as chill has led to the evolution of cynanche. The varied and wondrous molecular powers and capacities of apparently simple carbon compounds point to a hypothesis co-equal with the phenomena and evolution of cholera, fevers, etc., etc., and the more so when we take a justly wide view of the gradations of fevers, cholera, epidemic pleurisy, epidemic pneumonia, etc., etc. Dr. Thudichum ("Tenth Report to Privy Council, 1867," pp. 154, 155) illustrates the great influence of the "polarity" of atoms on the qualities of compounds, and further says that "there are several turpentine substances distinguishable only by the different influence on the polarised ray of light." Such facts reveal to us the infinitely minute molecular conditions on which the greatest differences in properties depend, and they have great bearing both on the actual changes which precede and mainly precipitate disease, and on the modes of action of our therapeutics.

The hypothesis of cosmic evolution will compel us to bring our therapeutics within the law of continuity. As before remarked, the existence of strychnine in certain vegetable seeds, and the evolution of its hypothetical isomer in our tissues after a wound, must involve the operation of a common law or Form. Further, as we are compelled to apply a pangenetic hypothesis to the evolution of the parts and qualities of plants, so we are led to expect that the qualities and functions of the tissues of an animal are not so greatly localised in differentiated organs, but are rather generally diffused or existent in all the tissues; and thus in a disease like tetanus we should search for its conditions, not wholly in the medulla and its nerves, but also in molecular changes diffused in the cell-contents and "gemmules" of the living protoplasm.

It seems vain at present to attempt to express these complex molecular vital changes and forms by chemical symbols.¹ But it does seem worth our while to indicate

¹ Professor Cayley ("Nature," vol. xii., p. 483; "Report of British Association, Bristol, 1875") establishes from mathematical law "that theoretically, for a body whose formula is $C_{13}H_{28}$, there exist 799 isomeric bodies. It is worthy of remark that the mathematical theory agrees with experiments for the first five bodies, thus affording strong confirmation of the truth of the remainder."

the breadth of the laws which are involved in human deviation or disease, not only for the sake of philosophic "unity of method," but for the sake also of getting on the right method of prophylaxis—*e.g.*, in a case of tetanus which has shown, say, two weeks after a simple wound, we are certain that molecular processes have been happening, according to absolute law and order, during such interval. It cannot be more beyond our reach to arrest such processes than to produce them by wounds or by strychnine. Again, we can never doubt that there is a prestige of unstable equilibrium of the molecular modes of protoplasm which precede cholera outbursts. The final precipitation of the fatal degree or amount of change is often effected by the smallest changes in environment—*e.g.*, chill, emotion, shock, change of place, change of drinking water, etc., etc. We see here the law of continuity, which directs us to prophylaxis, to coördinating the unstable equilibrium of the body with its environment; and such means of coördination must be as delicate in degree, and as absolute in continuity, as are the precipitating conditions. Man has so far read the laws or rates of mechanical motion as to have built up the science of astronomy. He has further read, or is now in process of reading, the method of the correlations of the physical energies. But these studies are elementary stages of those more complex and involved series which obtain in the organic. The deductive Form of continuity assures us that organic existences obey orderly laws.

Whether we contemplate the facts of disease or of therapeutics, the potentialities and continuity of the carbon compounds with both chiefly fill up the view. The unconquered regions of disease are being attacked on one side by the great advances of the higher chemistry of the carbon compounds; and no less are they being attacked on another side by the *experimental* practice of our therapeutics, whilst the mind is left justly expectant and receptive under the great Form or deductive law of Continuity.

NOTE.—Dr. Hodgkinson—quoted by Lockyer, "The Chemistry of the Sun," London, 1887, p. 60—says, "In the case of many compounds of carbon alone we are able to trace them through their entire range of existence. . . . In all cases the complex groups, formed from simpler ones, have related but not identical properties. In other substances this range of conditions of existence passes gradually out of our reach, but the phenomena remain the same in kind. Atomic combination or condensation is probably the cause of what is termed the 'allotropic state' of some forms of matter. It is strikingly in analogy with polymerization, but its investigation is at present out of our reach."

FROM GENERATION TO GENERATION: A PRELUDE TO THE STUDY OF HEREDITY.

By R. A. DOUGLAS LITHGOW, LL.D., M.R.C.P. ED., F.S.A.
F.R.S.L., ETC.

(Continued from page 15.)

Diseases of the Respiratory Organs.—In proceeding to consider the hereditary element in the diseases of the respiratory organs, I shall not content myself by merely stating that certain of these diseases are distinctly hereditary, but taking a broader view of them all, I contend that, for reasons insisted upon over and over again in the foregoing pages, there is a predisposition of tissue inherited by those who suffer from any of them, as, indeed, there is, and must be, in all morbid processes which are not distinctly

acquired. As I have already stated the nature of these predispositions is unknown to us, but of the following fact there can be no doubt—*viz.*, that physiologically, psychologically, and pathologically, also, the textural and functional peculiarities of ancestors and parents are handed down to their descendants by heredity in varying proportions, modifiable by variability and the influence of external circumstances. The law of heredity is inexorable, affecting body and mind in health and disease, so that every record of disease in a parent's life-history is stamped indelibly on the tissues of his child. Let me not, however, be misunderstood; I do not mean that the diseases of the parents are handed down in every case as entities to their children, but that the textural or dynamical peculiarities of parents, whether inherited or acquired, will undoubtedly be reproduced, in varying proportions, and subject to certain modifications, in their children, as, at least, predispositions to the same. This is very mysterious; and although we cannot understand or explain the processes by which such effects are caused, we must, as the result of observation and experience, accept the fact that, as surely as a child resembles his parent or parents in his or their external configuration, so assuredly does the resemblance extend to his internal textures and organs, and even to a predisposition to the same morbid processes from which they may have suffered, and which he has inherited from them.

Pulmonary Phthisis.—Of the diseases of the respiratory organs none, perhaps, is more dire in its effects, or more unquestionably hereditary, than pulmonary phthisis or consumption, which has been known to exist contemporaneously with the sources of our historical information, and to which, according to Hirsch, probably two-sevenths of all deaths are now due. Without entering into a discussion of the various pathological theories which have been broached from time to time as to the real nature of tubercle, I shall content myself by observing that there is a correlation, however imperfectly understood, between the scrofulous and tubercular diatheses, and that while both are markedly hereditary, the tubercular diathesis is met with only in the scrofulous. "How this inherited diathesis," says Ruehle,¹ "is produced, or what is its real nature, are questions beyond our present knowledge; but if the external form of the body, and mental qualities, can be transmitted in families through generations, why should this not be the case also with the conditions which produce a disposition to certain diseases? If in the former case we do not demand that the comparison be made only between children and their parents, but include also the grandchildren and nephews, why should we not observe the same rule in regard to the inheritability of disease? Why do we narrow the question to asking whether the father or the mother is known to have the same disease at the time of conception? Is not a disease often present before it can be recognised? May there not be a disposition sufficient to be transmitted, although it does not manifest itself as a recognisable disease until afterwards?" In reply to such questions as these, I unhesitatingly reply to each of them in the affirmative. For, in the first place, as heredity is a law of our being, and as the material, functional, and dynamical peculiarities of ancestors and parents are transmitted by them to their descendants, it assuredly follows that the conditions which produce a predisposition to any morbid process are also transmissible.

¹ Ziemssen, vol. v.

We are too liable to narrow down the question of hereditary descent as if affecting only the qualities inherited by a child from his parents, whereas it is a matter affecting the evolution of the race. For every living individual has been dependent upon some other or others as far back as the history of man is recorded by the hand of time; for has not every unit of the human family originally sprung from one source? and if we could each trace our pedigrees back into the ages when man first made his appearance upon earth, we should find them all converging in him the primal and earliest father of our race—whose brow first shone with the divineness of humanity. If heredity is a law of our being, it has been so since man first appeared on earth; let us see how this affects the question. Let us take the case of any living individual: he must have had a father and mother; these also must have had fathers and mothers; and these also; and so on back through the ages to the earliest parents of the human family. We may regard health and disease as coeval with human life; therefore the pedigree of disease is not to be regarded as of recent origin, or its sources traceable to recent influences, but rather to be found in the records of the earliest history of man, wherein we may read the “record of its long descent.” Throughout the ages, and amid the many altered conditions of the earth, man has been much the same as he now is, as far as his subjection to the laws of heredity and variability; the same in barbarism as in civilisation; the same with regard to his health and his diseases; it therefore follows that whilst the influences of heredity are strongest upon him, the more closely he is subjected to the influences of his more immediate ancestors, all the past may be said to slumber in him. We should not therefore regard hereditary descent as affecting only the transmission of the parents’ peculiarities to their children, but also the transmission of qualities derivable from earlier, and even remote, ancestors. How necessary this is we can infer from the frequency with which latent or dormant peculiarities—traceable to some remote or collateral member of a family—develop themselves unexpectedly in some of his descendants; and thus it is that every patient who comes before us is made up of such a mingling of temperaments, idiosyncrasies, and diatheses, as can only be appreciated, and that imperfectly, by even the keenest diagnosis; and of inherited peculiarities of tissue, and function, and dynamism, which may be active or latent; of potentialities or deficiencies which morbid processes can alone reveal.

But to return. Statistics are, and can only be, unreliable and valueless in regard to the percentage of inherited cases of phthisis, and we can only accept the concurrent testimony of every age, which is so strong that it cannot be doubted or rejected. Whole families have been exterminated by phthisis, and, according to Hörlin, as stated by Hirsch, in the island of Marstrand, where only one person had died of consumption during seven years, there were five consumptives then living there, four of them sisters, whose mother had died from this disease. The inherited predisposition to consumption may reveal itself in different ways—sometimes in constitutional delicacy, sometimes in special local affections of the thorax or its organs—and these may or may not be observed at birth or during childhood, but are generally noticed at a later period, as, for example, at the time of puberty, when growth and development are more rapid. However we may subdivide the inheritability of phthisis we cannot but regard it as a factor of prime importance in the etiology of the disease. Although this predisposition is

commoner perhaps among women than men, and its transmission more common through the mother than the father, yet where one parent only is affected fathers transmit more readily to sons, and mothers to daughters, than the converse. Dr. Pollock lays stress on the influence of hereditary predisposition in the acute forms of phthisis, and states that out of 179 cases only 34 could positively declare absence of family taint. Dr. Theodore Williams says the principal effect of the predisposition is to be seen not in any peculiarity of the symptoms, but by the influence it exercises over the age of attack, which is much earlier in those predisposed than in others.

Regarding phthisis as a disease essentially belonging to those which are dependent upon an inherited predisposition, and as the concurrence of several conditions is usually necessary for the development of chronic diseases, we must differentiate between those conditions which are inherited and those which may be acquired. Of the former we must recognise a congenital defectiveness of resisting power, which although not synonymous with weakness, may be associated with it. This is generally manifested in the children of weakly parents, or of closely-related inter-marriages, or when there is a marked dissimilarity in the respective ages of the father and mother, or when repeated pregnancies have followed each other in rapid succession. “Usually in such persons one or several parts of the body are again and again the seat of disease, and form the *locus minoris resistentiæ*. If this be situated in the respiratory organs, frequent and long-continued catarrhs of the nose, larynx, and air-passages occur, and perhaps give rise ultimately to pulmonary diseases which develop into phthisis.”¹ This condition is essentially transmissible, as is also scrofula, another of those conditions which usually concur in the production of chronic diseases.

There is one point of some importance to which I should have referred before, and which I may now be permitted to allude to, especially as it exercises a modifying effect upon the influence of heredity generally, and to a great extent affects the inheritance of disease—viz., that which has been denominated “the tendency to reversion from all variations of specific characters;” for, as the preservation of the specific characters of the species essentially concerns the law of heredity, the determination of individual characters is manifested most in the law of variation: and thus, the inheritance of a disease-tendency, however probable, is not invariable, as disease-tendencies, like parental characters of mind and body, are either held in check or actually neutralised by one of the parents of the child being healthy, so that the constitutional disease of the other may be, in a manner, diluted. “Phthisis,” says Dr. Maudsley, “is a notorious instance, passing so directly from parent to child, as to entail the extinction of a family when it is not neutralised by favourable inter-breeding. For such neutralisation, not of phthisis only, but of other disease-tendencies, may undoubtedly be effected, although we have not at present any knowledge of the laws by which the good result is brought about; the fact, however, is certain, and profoundly significant. The union of two individuals, one of whom has a marked disease-tendency of a particular kind, produces an organic constitution in which it is held in neutralisation or check, never showing itself in their children. It has become a disease-immunity for that generation. Did we know the exact nature of the neutralising process it would no doubt be possible, by suitable arrangements for subsequent breeding, to get rid entirely

¹ Ruehle, *Opus cit.*

of the morbid tendency and to obtain a perfectly sound stock. Unfortunately we do not, and so are liable to find the neutralisation temporary, since it not unfrequently happens that the union of the offspring which is apparently free from the disease-tendency, because it is held in check, with a person who is also apparently free from it, produces an organic nature in which it shows itself distinctly. It is somehow made a disease-aptitude again." Sir James Paget says: "Through such dilutions and such tendencies towards recovery of health in embryo-life, and in a less degree after birth, we may believe that many of the lesser constitutional diseases are derived; but of the rate of diminution in transmission, and of the possible changes of form associated with changes of intensity or quantity of disease, we know very little, if anything. And very little we know of the results of the transmission of more than one constitutional disease to the same offspring. We can often see plainly that the forms in which different persons display a constitutional disease appear very different from those seen in their parents. Thus, in a family of which one or both parents had typical gout, or tuberculosis, or scrofula, there may appear any number of the lesser forms of these diseases, or of the forms deviating furthest from the type. And yet a certain general similarity may appear in all the local manifestations of each constitutional disease thus variously transmitted. They may be unlike in structural appearance while affecting different structures, and yet they may be like in their time-work, or in the production of some characteristic morbid product, or in the influence which medicines or diets exercise on them. These things may prove the same constitutional origin in apparently very different local diseases." This long digression may, I trust, be excused, as I had omitted to refer particularly to those neutralisations or checks to inheritance which frequently resulted from favourable inter-marriages; but it will be seen that although these neutralisations or checks—however they may be perpetuated in theory—are in the majority of instances nothing more than examples of *atavism*, and that the original disease-tendency is transmitted to a generation by heredity, subject of course to the law of variability so far as individual characteristics are concerned.

To return, however, to the further consideration of the diseases of the respiratory system as subject to the influence of heredity, I may regard pulmonary phthisis as a typical constitutional disease occurring in persons of the scrofulous diathesis. When considering the diatheses I was careful to point out that their development, in the great majority of cases, required many generations in which to accomplish it, for they are in reality peculiarities of health amounting to morbid tendencies which have been accumulated and intensified in their long descent so that we can now recognise them as types of constitutions with which are generally associated certain well-known forms of disease. Of these diatheses which were termed universal, because they are not only as old as the race, but because every individual is more or less subject to their influence, are the *scrofulous* and the *catarrhal*; there is surely, therefore, no occasion to prove their transmissibility! These may co-exist or be blent in varying proportions in different individuals, and it may be stated as an axiom that the more the scrofulous diathesis preponderates, the greater the danger of catarrhal attacks in an individual. Mr. Hutchinson has well defined scrofula as a permanent and heritable condition, favouring chronicity in all inflammatory processes, and directing them towards more or less specialised

ends; and catarrh, as inflammatory congestions excited, in a reflex manner, through the influence of cold applied to the surface: therefore, whatever is the result of "catching cold" is catarrhal. He says: "The susceptibilities of the nervous system, however, in this direction differ, as we all know well, very greatly in different individuals. These differences are hereditary, and may easily become the possessions of families or of race. Not only do individuals differ in the degree of reflex susceptibility, but they also vary much as to the special tissues or organs which are most prone to suffer under it. Thus, some catch cold almost solely in the mucous membranes of the nasal passages and pharynx; in others, the tonsils, throat, and larynx are more prone to suffer; in others, the bronchial mucous membrane, etc." To these two diatheses, therefore, I trace the heredity of the majority of the diseases of the respiratory system, for it will be found that by far the greater number of them are included under the heads of scrofulous or other well-recognised constitutional and heritable conditions, and under that of the universally-developed catarrhal diathesis. Thus under the head of scrofulous diathesis may be included chronic tubercular phthisis, acute miliary tuberculosis, pleural tuberculosis, and, perhaps, gangrene of the lungs; whilst under that of the catarrhal diathesis we may range croupous and catarrhal pneumonia, croupous or fibrinous bronchitis, bronchitis, croup, coryza, rhinitis, blennorrhoea, acute and chronic laryngitis, catarrhal tracheitis, bronchial catarrh, pleuritis, tonsillitis, etc. In this list I do not include pulmonary emphysema, and bronchial asthma, which are, however, well-known to be hereditary. Various other so-called diseases of the respiratory organs might be mentioned, as pneumo-thorax, hydro-thorax, hæmoptysis, atelectasis (often congenital), oedema, etc., but as these are for the most merely symptomatic of other diseases, I shall not now further allude to them.

What I am contending for is not that all the diseases of the respiratory system are hereditary or heritable as such, but that in the case of each of them there is a predisposition which is inherited by every individual affected by them; and that this predisposition of tissue, cell or membrane, unless neutralised or held in check by marriage into a different stock, will inevitably reveal itself, and if not in one generation, it will assuredly in the next; for as Dr. Maudsley says: "A disease-tendency, which is latent or dormant at one period of life, or throughout the whole life of the individual, may undergo actual development at a particular physiological epoch, or on occasion of a great bodily crisis from some other cause; and a tendency which is latent or dormant in one generation may show itself in the next generation." Nothing in nature is lost, and whether for weal or woe to the individual, her laws are inexorable, and must be obeyed. Heredity is the law as affecting the character of the species; whilst the individuals are subject also to that of variability, thus necessitating the differentiation of individuals. On the whole, however, we inherit from our ancestors and parents not only our bodies and our minds, but a predisposition to their diseases; and of the latter none more surely than those of the respiratory system. For of the diseases of the respiratory organs, nearly all have their source and origin in the scrofulous and catarrhal diatheses, and these in themselves the result of inheritance in past ages have been handed down to us, modified or intensified as the case may be, by our fathers.

(To be continued.)

LITHOLAPAXY IN MALE CHILDREN.

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ASSISTANT SURGEON TO THE LONDON HOSPITAL; SURGEON TO ST. PETER'S HOSPITAL
FOR STONE AND URINARY DISEASES.

THE removal of a stone from the bladder of a young child by the crushing operation is not an innovation. *Pari passu* with the improvements and successes of the lithotrite arose the conviction that such methods were not only applicable to the adult, but could be also employed in the child. Civiale adopted the operation, and strongly advocated it.¹ His example was followed by many of his countrymen, notably Jobert de Lamballe. Guersant² published a series of forty cases of lithotrity (thirty-five in boys and five in girls), with three deaths.³ In 1874 we find it a recognised method in France for removing stone in children, being mostly practised at the Children's Hospital in Paris, by St. Germain, Giraldès, and others. Isolated cases are to be found in the literature,⁴ and from these sources a death-rate of 15.2 per cent. has been estimated, a result which contrasts very unfavourably with that of lithotomy in children, the death-rate of which is 6.6 per cent.⁵ Since the introduction of litholapaxy by Bigelow, the treatment of stone in children has advanced by a measurable stride. Not only is the mortality diminished by this crushing operation from 6.6 per cent. to .9 per cent., but also the rapidity of cure is accelerated, and is accomplished in *two to three* days instead of in seventeen to twenty-one days, and that without a cutting operation. The operation of crushing and evacuating the stone at a single sitting, which I am about to criticise and compare with the cutting operation, must become as rapidly popular as the same operation is in the adult, and the firm and recognised position which the former procedure will take, will be owing to the able advocacy and brilliant results of our English *confrères* in India, Surgeon-Majors Keegan, Goldsmith, and Freyer, and in this country to Mr. Walsham.

The valid objections to undertaking *lithotrity* in children are as follows:—The bladder and urethra are so small in children that the operation has to be performed many times before the entire stone is crushed fine enough to become passable with the urine; owing also to the narrowness of the calibre of the urethra, frequent complications arise from the impaction of the sharp-pointed fragments of stone in the canal; lastly, although the ultimate success is good, yet the cure is tedious, and frequently attended with much distress and suffering.

Surgeon-Major Keegan was the first to demonstrate the ease and safety with which calculi in children may be crushed and evacuated at a single sitting (litholapaxy), and has placed on record a series of fifty-eight cases, with one

death. This ease and safety is well exemplified by the following case, which came under my care in November last:—

F. S.—, æt. nine, had had symptoms of stone in the bladder for three years. The calculus could be felt by the aid of a sound, as well as per rectum, to be about the size of a large almond. The meatus was narrow, so that a meatotomy was performed under chloroform, by means of a blunt-pointed bistoury and a No. 12 fenestrated lithotrite passed with ease into the bladder. After three or four crushings the debris was removed by means of a No. 12 evacuating catheter and aspirator ball. The washings showed the faintest tinge of blood. The time occupied was twenty minutes. The stone weighed fifteen grains. The boy got up next day; he passed his water easily and painlessly. He was ready for dismissal on the second day, when a mild attack of scarlatina showed itself, and delayed his convalescence. This case impressed me greatly. A certain number of calculi in children come under my observation every year, and lithotomy has hitherto always been performed. The average duration of convalescence is 18.6 days, and as my former colleague, Mr. Teevan, has pointed out, a most obstinate and long continuing incontinence is apt to appear in one year after that convalescence is complete.

Certain objections to litholapaxy have been brought forward:—

1. *Age*.—It has been thought that the age of the little patient would be an element of danger. The best answer to that are the statistics of age in the 106 cases which I have collected.

Age.	No. of Cases.	Deaths.
Between 1 and 2 years	6 cases	None.
„ 2½ and 3 years	10 cases	None.
„ 3½ and 4 years	13 cases	One.
At 5 years	16 cases	None.
Between 6 and 9 years	34 cases	None.
„ 10 and 15 years	27 years	None.
	106 cases.	1 death. <i>i.e.</i> , Mortality = .9 per cent.

2. *Size of Urethra*.—It was supposed, but disproved by Surgeon-Major Keegan, that the size of the urethra would be too small to allow of the introduction of lithotrites and evacuating catheters sufficiently large to perform the work. Cases at the following ages permitted the following sized instruments to be passed after incision of meatus:—

Age.	Size of Lithotrite (English Scale).	Size of Evacuating Ca- theter (English Scale).
1 year, 3 months	No. 6 (E.)	No. 6.
1 year, 9 months	No. 9	No. 6.
1 year, 9 months	No. 7	No. 7.
2 years, 3 months	No. 7	No. 7, 8, or 9.
3 years, 4 months	No. 8	No. 9.

Some boys have peculiarly large, and others particularly small urethræ—a varying condition which I have reason to believe is due to heredity. Each urethra must be judged on its own merits, none tally with a fixed standard. It is only after narcosis and incision of the narrowest part of

¹ Lithotritie, pp. 266 et seq. “Ces petits instruments avaient paru faibles à quelques personnes, mais les craintes disparurent lorsqu'on vit des enfans, même très jeunes, être opérés avec succès par la nouvelle méthode. En 1827 je fis une opération de ce genre sur un enfant de sept ans, très peu développé, et qui portait une grosse pierre. Elle eut lieu à l'hospice de perfectionnement, et fut couronnée d'un plein succès.”—p. 267.

² Guersant. “Maladies des Enfans.”

³ Fournier. “Lithotritiev chez les Enfans.”

⁴ Porta de Pavie. *Union Médicale*, 1874, September 29th.

⁵ We do not include the brilliant and unequalled results of Freyer in India, who has had 143 cases of lithotomy in children without a death.

the urethra—i.e., the meatus—that we can select the proper sized lithotrite which the case before us will safely admit.

3. *Size of Stone*.—A large-sized stone was supposed to be an insuperable difficulty. This belief is at once overcome by the record of a stone weighing 700 grains, successfully removed from a boy æt. nine and a half years by Surgeon-Major Caldecott. The chance of meeting large stones in children is fortunately small. Thus, in only 21 per cent. of the cases did the stone weigh between 100 and 200 grains, in 8 per cent. of the cases between 200 and 300 grains, and in 3 per cent. of the cases between 300 and 400 grains.

The size must of necessity depend upon a variety of causes, such as the duration of its formation and the nature of the urine, but it is useful as well as encouraging to note that the stone in children is *usually small*, and that if large stones are met with, it will be in direct proportion to the age of the patient; so that roughly speaking we may say, *the larger the stone is, the older is the patient, and the greater is the size of the lithotrite allowed*. Both these points may be tabulated as follows:—

Age.	Weights of stones crushed, in grains.	Rough practical calculation.	Percentage calculation.
Under 2 yrs.	18 15.....	All under 20 grs.	100 per cent. under 3 js.
At 2 years	7 8 10 11 24 30 32 ..	40 grs.	80 " " 3 js.
At 3 years	12 14 16 19 38 50 52	100 grs.	70 " " 3 i.
At 4 years	27 30 35 38 55 115 136	140 grs.	71.4 " " 3 i.
At 5 years	17 20 27 36 30 32 34		
	41 45 51 84 85 116		
	140 158	150 grs.	66.6 " " 3 i.
At 6 years	10 14 23 50 65 72 105		
	210	210 grs.	50 " " 3 i.
At 7 years	5 14 30 30 57 72 122		
	140 148 160 166 220	230 grs.	41.6 " " 3 i.
At 8 years	15 16 28 45 95 176 285	300 grs.	57 " " 3 i.
At 9 years	90 145 158 700 .....	..	None " 3 i.
At 10 years	9 22 30 43 80 100 136		
	170 190 200 270 360	360 grs.	58.3 per cent. " 3 ii.

4. *The Hardness of the Stone*.—This has more than once forced the operator to substitute lithotomy for the proposed litholapaxy. But it is not often that a stone in a child's bladder cannot be crushed. In four of the 106 cases it is specially noted that the stone was "very hard."

The composition of the calculus must always depend upon a variety of causes, such as food, climate, diathesis, and co-existing cystitis; but it is not unpractical, as regards the "crushability" of the average stone, to grasp perceptibly an idea of the hardness we may have to encounter. Thus:

PURE STONES.

Oxalate of lime calculi (i.e., the hardest)	were met with in 13.5 per cent. of the cases.		
Uric acid calculi	"	"	45.5 " "
Phosphatic calculi	"	"	13.5 " "

COMPOSITE STONES.

Mixed oxalates and phosphates	met with in	3.	per cent. of the cases.
Mixed oxalates and uric acid	"	7.5	" "
Mixed urates and uric acid	"	1.5	" "
Mixed urates and phosphates	"	12.1	" "
Mixed uric acid, oxalate of lime and phosphate	"	3.	" "

From this we infer that in 13.5 per cent. of the cases, we may encounter the toughness of oxalate of lime: but the greater proportion are uric acid (45.5 per cent.), and 86.5 per cent. are easily crushable.

Contra-indications to Litholapaxy in Children.—Presupposing that the surgeon is used to lithotripsy in the adult, and has a light and dexterous hand, these contra-indications are only three in number: (1) a very small-calibred urethra not admitting even a No. 5 English lithotrite; (2) a very hard, or very large stone, or one with a nucleus of a foreign body; (3) a contracted and diseased bladder. Two of the contra-indications can be established by rectal examination. Thus the size and shape of the stone, and its position in the bladder, can be readily estimated per rectum, and the tonicity and dilatibility of the bladder also appreciated by the same means. It is not too much to insist upon that a careful examination of the patient, and his history, is essential to an unbroken series of successful cases. Thus the one fatal result out of 106 was caused by operating upon a case undoubtedly fitted for lithotomy rather than litholapaxy.¹

Gotia, æt. four, was pushed down in a field by a companion, and with the force of the fall a piece of the stalk of the tilli² penetrated his anus, pierced the bladder, and broke off in that viscus. A stone, three-quarters of an inch in length, formed round it. Mr. Ginput Singh crushed it, and, at subsequent sittings, pieces of the tilli stalk were removed in the jaws of the lithotrite. The boy died, and it was evident that, had a more careful examination of the history and the case been undertaken, the boy would have been subjected to lithotomy rather than litholapaxy.

Certain golden rules may be laid down for litholapaxy in children:

1. Examine carefully, per rectum, to ascertain size of the stone and the condition of bladder.

2. Let your decision, as regards the advisability of litholapaxy, be made subject to the size of the urethra and the hardness of the stone—estimating both while the patient is under chloroform.

3. Never *force* the lithotrite through the meatus. Incise the latter. (Keegan.)

4. Select invariably a *completely fenestrated* lithotrite. (Keegan.)

5. Use the lightest of hands, work towards the posterior wall, and let your crushing be thorough.

6. Remove *all* through an evacuator catheter carrying a stylet, using the latter to rid the eye of any sharp particle which may cut or lacerate the delicate urethra during the removal of the instrument.

Litholapaxy v. Lithotomy.—Keegan writes "I would almost as soon think of performing lateral lithotomy on an old man, the subject of a small uncomplicated stone, as I should think of performing lateral lithotomy on a boy whose urethra readily admitted the passage of suitable lithotrites and evacuating catheters, and whose stone was neither abnormally hard or large." This opinion I would most warmly endorse, and I would tabulate the differences between the two operations as follows, to show at a glance

¹ *Indian Medical Gazette*, 1884, p. 135, May.

² *Didymia angiospermis* Sesamum, Schreb-gen N. 1048. An annual, growing in a good soil to three or four feet high.

the results which bear testimony to the solidness of that opinion:

Operation	Percentage of deaths	Causes of death	Complications	Average length of time recovering	Pain	Advantages	After-results
Lateral Lithotomy	6.6 per cent.	Peritonitis Eight per cent. cysto-pyelitis and nephritis Six per cent. intercurrent	Perforation of urethra Rupture of urethra Hæmorrhage Wound of rectum, etc.	17.6 days (Keegan) 18.9 days (St. Peter's (London))	Vari-able	Complete removal	Incontinence (Teevan) Emasulation (Langenbeck)
Lithotripsy	15.9 per cent.	..	..	Two months	Great	..	Many attacks of cystitis, orchitis, retention, etc.
Litholapaxy	.9 per cent.	Nephritis	Nipping of bladder wall in one case	Next day well and up Discharged in 7 days (Keegan) 4.5 days (London)	Nil	Rapidity of cure No cutting operation	Nil

Special Articles.

MEDICAL ETIQUETTE.

BY ALFRED J. H. CRESPI, WIMBORNE.

FORMERLY EDITOR OF THE "SANITARY REVIEW."

THE doctor's life is a long contest—a contest with disease, and trying to hold his own and get a livelihood. In hardly any other liberal calling is the conflict so embittered, and in no other is the estrangement between rivals so undisguised and so prominently and persistently forced upon the notice of the general public. Having had many and unusual facilities for seeing the strained relations of medical practitioners in different parts of England, having indeed forty-three times had sole charge, usually without remuneration, of practices in Yorkshire, Lancashire, Cornwall, Hereford, Berkshire, Gloucester, and I can hardly, without an effort, recall all the other counties, I have often been both pained and surprised. I have, moreover, in the course of this work attended all grades of patients from club and parish clients up to the families of bishops, judges, peers, and presidents of the British Association, and I have also acted as *locum tenens* to men who were

brothers of bishops, and cousins of men of title, so that my opportunities have been more numerous and varied than fall to the lot of most men.

Medical etiquette is—in plain English—nothing but the golden rule, "Do to others as you would that others should do to you," in other words that etiquette, which to the public is so puzzling and which fills so large a portion of medical life, and, let me add, of the medical papers, rests upon a golden Gospel precept. So far so good, and were the rules of etiquette better defined, more easy of application, and were not the disintegrating influence of medical life so far-reaching and difficult to counteract and avoid, they would be of inestimable advantage to the profession and to the public. As it is I fear that they are more often heard of than practised, and that they are too frequently used as a cloak for much unbrotherly and ungentlemanly conduct.

A medical career lacks, and always must lack, those social advantages which attract many able and accomplished men to other liberal callings. Not that medicine is not a useful occupation, one affording ample scope to the powers of the most enlightened and far-reaching mind. I cordially endorse the words of Sir James Paget, when he says, "that I dare to claim for medicine that, among all the sciences, ours in the pursuit and use of truth, offers the most complete and constant union of those three qualities which have the greatest charm for pure and active minds—novelty, utility, and charity." The pecuniary emoluments of medical practice are probably generally in excess of those of the Army, the Bar, and the Church, though it may be decidedly less than those of solicitors. But the doctor has to earn his money in the sweat of his brow, with unceasing expenditure of labour, anxiety and trouble. He is never out of harness. His duties are often most onerous and disagreeable, and they engross his thoughts and his time more than do those of the majority of other professional men, indeed, it would be possible to maintain, though of course a man knows the unpleasantnesses of his own calling better than he does those of others—that the doctor's life is, as a broad rule, less socially attractive than that of any other professional man. It has been long lamented that the public recognition of these truths is not more keen and generous. Able medical writers, like the illustrious Dr. Gregory, acutely feeling the drawbacks of medicine, and the want of precision and loftiness of aim of many medical researches, have not hesitated to write as he did, that "I think it more than probable," that is absolutely certain, "that in fifty or a hundred years the business of a physician will not be regarded in England as either a learned or a liberal profession." While Sir Richard Blackmore, when a young man, having inquired of Sydenham, that famous practitioner of his day, whose name is still familiar to us in connection with the Sydenham Society, and the originator of the phrase "the natural history of disease," what books he would advise him to read on medicine, was startled to be told "Don Quixote." It was not too severe a comment on the part of Johnson, in his life of Blackmore, when he accused Sydenham in this reply of falling far below the dignity of his profession. Johnson wisely and impressively added, "The perverseness of mankind makes it often mischievous in men of eminence to give way to merriment; the idle and the illiterate will long shelter themselves under this foolish apophthegm." Sir William Hamilton, of course not writing with any practical knowledge of medicine, although he had among his personal friends many of the

foremost medical teachers and practitioners of his day, contributed a famous and brilliant essay to the *Edinburgh* of 1832, with the avowed object of showing that medicine had made no material progress since the days of Hippocrates, a proposition that I shall neither pause to maintain nor to combat; my object in giving these quotations is to show the small respect often expressed for medical studies and medical practitioners.

Candidly medicine is not a favourite pursuit of the rich, the powerful, and the high born, and from the exacting nature of the duties which it imposes upon its professors, they speedily, I fancy, settle down as practitioners, mainly striving for an income. Unfortunately their sphere of labour necessarily overlaps that of other men similarly engaged in their neighbourhood, and, moreover, the most eminent practitioner has no immunity from the annoyances of practice, and may be discarded at the caprice or whim of a patient for another. I have known illustrious men thrown overboard for men of far inferior social and professional attainments and position. A friend, and subsequently a client of mine, once had Sir Thomas Watson and Sir William Jenner in independent attendance on a sister of hers, and after a time the former received his congé with little delicacy.

The rules of etiquette in theory are plain enough. Any doctor can set up anywhere; he must not advertise, run down his brethren, or misrepresent his own qualifications and experience. He can apply for any appointment for which he is eligible. On settling in fresh quarters he calls, as soon as possible, on his neighbours; in the open country that may mean going over an area of ten miles radius. In a small town he calls upon all the local men; in a larger one, upon those in his immediate neighbourhood; while in a great town or in the metropolis, especially in the medical quarters, he confines himself usually to his immediate neighbours and to acquaintances, the professors at his school, or those connected with any society or association with which he has relations. His friends and those medical men, whom he has called upon, in due course call upon him, and from that time he is supposed never to disparage any of his brethren, never to use any unfair arts to supplant them, not to attend any one who is the client of any other practitioner, and to insist upon consultations in all serious emergencies. In short he must be scrupulously considerate and long-suffering in all the concerns of medical life. Of course his brethren are presumed to act in like manner towards him. So far the theory.

Now about the practice. In small towns, and in the open country, if a man sets up and does not buy a practice, and of course he may want to settle in a place where there is not a practice for sale, his arrival is often like that of a fox in a hen-roost. His brethren resent, as a dire insult, his arrival among them. Perhaps they are all struggling for a bare livelihood, pressed to meet bills and keep down expenses; perhaps they have spent a large sum in buying a practice, or they have succeeded to an old-established position, or they have sons or relations they want to introduce to their own clients. The new doctor calls: one man receives him, his face red like a turkey cock's, his hair bristling, animosity depicted upon every lineament. "I am Mr. Jones," timidly says the caller, "and I have settled here in practice." "Oh," retorts the host, "Who told you to settle here? This is the worst place in all England; wages low; half the people going to hospitals; the Mudtown and Downhill fellows are

eternally here; you won't get a livelihood in ten years. Of course," and this with a vicious glare, "you know that in such a place as this any patients you get must be taken from the other men. Why on earth didn't you go to Swinford, there's plenty of room there." Five minutes ends the pleasant interview; the visitor is generally not asked to sit down, and when he is marshalled to the door the slam with which it is brought to, tells him significantly enough that he is not wanted there again. Some of the local surgeons don't return his call; others send a card by post. This is very common in towns of 60,000 or 80,000 people, while other practitioners will simply leave a card declining to enter. The new comer soon finds that his brethren do not talk graciously about him; his qualifications, motives, and antecedents are usually disparaged. If he chances to get a few patients he soon discovers that they are claimed by the older practitioners, and he has to transfer them, getting black looks and no thanks; in short, he is made to feel that he is an interloper and not a brother.

Am I going too far? An F.R.C.S. of some repute died a few years ago in a small town; that man was a Church governor and a good deal besides, and a great stickler for medical etiquette, but he is reported never to have noticed or called upon, or had any relations with a surgeon, who had set up in the same little town a dozen years before the senior's death. Again, a friend of mine once spoke to me in biting terms of the "scamp, rascal, impostor, and villain," who lived opposite to his front door. That objectionable person, however, I happened to be aware was a personal friend of people well known to me, and when I made enquiries I found that he was an excellent, well-qualified and accomplished man, but *here* was the offence, he had eight years before, set up, as he had a perfect right to do, in that rapidly increasing town, and thus he added another to the local small contingent of rival doctors.

As a *locum tenens* it has been distressing to find men, otherwise fairly respectable and well-behaved, at deadly enmity with all their medical neighbours. I once found a superior man in Lancashire at daggers drawn with ten other brethren, all, according to him, "drunkards, profligates, and imposters;" and I can call to mind eight or nine good enough men, who live isolated lives, professionally at any rate, having nothing to do with the two or three surgeons in their several neighbourhoods. In larger towns matters are not so bad, but even there antagonism is great, and at best there is often little more than an armed truce, liable at any moment to break out into open hostilities. Anything like friendly union is most rare, and any approach to confidence and mutual help is indeed a phenomenon. Every practice is a close preserve, every doctor fancies he has a vested interest in his clients, and any little bad turn he can do his neighbours he is only too ready to make the most of, indeed the relations are so strained that it is of no use for an outsider to try to make peace. In violent contrast with the tension due to a struggle for existence and the suspicion entertained towards his immediate neighbours is the warmth of the relations subsisting between him and medical friends some way off; where personal rivalry ceases to be felt there is room for devoted friendship and mutual regard.

There is no question in my mind that medical men would be great gainers, personally and socially, were they to cultivate greater confidence in their neighbours, and were there more giving and taking. As for the general public, the sneers with which they often ridicule the cat

and dog life of local practitioners are not pleasant to listen to. No medical man should forget that a practitioner has a full right to set up anywhere. If a new comer does not buy a practice, he has a long and severe struggle, indeed, usually speaking, no course when it can be avoided is more imprudent than trying to work up a general practice. The fresh comer has exceptional difficulties, and spends three or four times as much, in the long run, as would have enabled him to start as the partner of, or the successor to an old-established practitioner. When a practice is not purchased, the new comer has long to wait before he is in the running at all with his rivals; they are far ahead of him, and any ill feeling on their part is most unkind and uncalled for.

What happens if a practitioner does loyally transfer cases to the men who seem to have some claim to them? Let me try to show. In many cases it must never be forgotten that when a new practitioner is called in there are private reasons which cause that course to be taken. It may be that the old practitioner is getting disliked, or that some tension exists, or that a change is desired. A younger practitioner is called in; perhaps the house is a good one, and the introduction is valuable. On making enquiries he learns that up to that time someone else has attended; he is not informed why he has been called in; very likely full of notions of medical etiquette he goes off to the former practitioner and transfers the case. From a long experience in Birmingham I can say that never once did I get cordial thanks for so doing. I was always regarded as a kind of interloper by the doctor who resumed attendance, while I often entirely lost the family and never got called in again. I remember once visiting at a friend's, in South Down. The house was large and handsome, there were many guests, and the first day I was just sitting down to dinner when a servant came in with an urgent message for my host. In a minute or two he returned, "I am so sorry to tell you," he remarked, "that a friend of mine, an officer, the son of the Squire, has just had a fit, and his sisters, knowing you were here, have desired me to ask you if you would kindly go and see him." My friend continued that the family was one intimately known to him, and that it was very wealthy. I demurred to going. I was a stranger, besides no doubt they had a medical attendant. Well, I had to leave my untouched dinner, and to trudge some way in the mud and darkness. Arrived at the house I found a gentleman in strong convulsions, and I had no alternative but to remain till late at night watching over him. Now I do not like such cases, and I should have preferred transferring the sufferer to his own doctor. At eight next morning I called again, and later on in the day a second time, seeing the family. I was warmly thanked, offered any fee I liked to ask, but, as I managed to find out that though a Plymouth consultant often came, the more ordinary attendant was an elderly practitioner a few miles off, I declined, telling the friends that I was acting for the latter. After paying another visit or two, I, on the third or fourth day, marched off to the family doctor, a graduate in arts and medicine of one of our ancient universities. I found him living in a large house, and it was perfectly obvious that he was in affluent circumstances; he received me pleasantly enough till I explained who and what I was and why I had called, then his countenance changed: a dark frown overspread it; his voice became sharp and his words curt. "You need not trouble yourself about my patient; it is no business of yours; you should have sent for me at once; I will go off and see him this afternoon."

He rose; I was hurried to the door, and when I got into the street I felt for the fiftieth time in my life what hollow imposture medical etiquette too often was. I had lost a good dinner, and the company of a large and pleasant society; had passed some hours supporting the head of a powerful epileptic; paid three or four tedious visits; refused four or five guineas, which would have been most useful to me, and then was only rudely told to mind my own business, and blamed for not sending for a man, a total stranger to me, and about whom I did not learn anything for two or three days, and at last when I went to him it was plainly in opposition to the wishes of the family.

A well-known Gloucestershire surgeon, a man of iron resolution and boundless self-assurance, used to stand on little ceremony. I have been assured that he never hesitated to attend all the other doctors' patients in the district. He would lift his big forefinger and exclaim, "Another twenty-four hours of that man's attendance and you would have been a dead man." But then Mr. Nemo was too important a person to be trifled with, and his colleagues feared him. I do not advocate that kind of thing. But I do want some practical good to come from my paper, and, therefore, I will sum up briefly.

In the first place the medical profession is very full, the competition keen and the expenses of practice large. Every practitioner is trying to hold his own, to make a living, and to turn his opportunities to account. Men rarely practise medicine simply for pleasure as men may remain on in the army to enjoy the companionship of the mess, or as barristers may go on circuit for the pleasure of the life, or as clergymen will often hold livings for the sake of doing good in a pleasant and respectable fashion. No; the young, and the old doctor too, cannot be expected to shut himself up, refusing fees, declining to enter houses which other men may fancy are their peculiar province, and letting years slip rapidly away. So far true; at the same time there is a distinct loyalty to the calling and to one's brethren that every man should try to keep intact; he must give and take, holding out a helping hand, not resenting, as a deadly insult, any little piece of good fortune that befalls a younger brother. He should religiously guard himself against criticising the treatment and conduct of his rivals, especially when he has only the garbled and untrustworthy versions, which more or less dissatisfied patients give him. If he listens to their absurd tales, as I much regret to say most medical men will do, even the highest, if he permits himself to comment, as most practitioners will do, on the untrue reports of patients and their friends, he will cause serious annoyance and do much harm in more ways than one. When brother practitioners do him a kindness he should meet them in good part, frankly, cordially, and kindly; it will be quite time enough to show the cloven hoof when he finds that his brethren are not to be relied upon. Unfortunately there are in the ranks of the profession a large number of unscrupulous and dishonest men; men dead to all the higher qualities of human nature; men who will pay a visit once a week or three times a day according to the pecuniary circumstances of their clients, and without regard to the gravity of the symptoms; men who will malign a rival and traduce a friend; men who will take to the utmost letter of the law, but who never give one iota. These men are often the most successful practitioners, and are held in great esteem, and they are sometimes highly qualified, and most skilful, and hold important posts. These men are providentially in a minority, though they exist everywhere; with such

men as these, friendly relations are hardly ever possible.

Lastly, whenever a practitioner finds himself discarded, more or less courteously, for another practitioner, let him not blame the latter without due cause. Clients often hesitate to explain why they change: there may be good reasons, severe tension, I know not what, or mere caprice, especially in the case of that large class of imaginary invalids who delight to pour into a fresh ear their complaints, and long for another string of medical rules from still another adviser. Not seldom when friendship is waning, confidence being undermined and a change is desired, it is better to part amicably, preserving kindly relations to the last, and ever remembering that the doctor is the employed and the client the employer. But though all this is true, medical etiquette, liberally interpreted, generously acted upon, has great uses: it should govern the relations of the old as well as of the young; we must adopt it ourselves as well as expect others to comply with it; and we must guard against the too common error of expecting that our medical friends should be tightly tied down by its requirements, while we, on our part, feel at liberty to act as we like.

MONTHLY REPORT ON NEW PREPARATIONS, FOODS, DRUGS, INVENTIONS, ETC.

Liq. Podophyllin (Hockin); Liq. Podophyllin et Pepsin (Hockin); Liq. Podophyllin et Belladonna cum Strychnia (Hockin).—The above three preparations, prepared from the purest drugs, and miscible with water, infusions, etc., have been very favourably received by the profession. The *Liq. Podophyllin* will be found particularly useful in that large class of patients whose sufferings and symptoms depend on what we frequently call inactive liver. For efficacy and for convenience and elegance of dispensing we can recommend this preparation. The changes may be rung, in those cases which require a combination, on the other mixtures—for instance, in cases of chronic constipation, the strychnia combination will be found most efficient, while in other cases, associated with impaired digestion and general debility, benefit will be derived from the pepsin compound. In connection with this class of preparations we may allude to a question often asked us: "Should physicians prescribe these compounds?" The *St. Louis Medical and Surgical Journal* has very ably treated the question, and we give the following extract from the able article that has appeared in that journal. The editor first asks:

Why should a physician resort to these ready-made prescriptions at all? Why does he not draw upon his own knowledge of applied therapeutics, and write out his own formulæ in every case? Why does he prescribe this one's sugar-coated pills, or that one's gelatin-covered granules? Why, indeed? Simply because he knows that these articles, being made in vast quantities, by improved apparatus and appliances manipulated by highly-trained and educated employes, and directed by skilled chemists, can be made better, more accurately, and far cheaper than they could be compounded by the most skilful prescriptionist. He does it for the same reason that he buys a watch ready-made from the jeweller, or a buggy ready-made from the carriage maker. The gist of the whole matter depends upon what is meant by the term "proprietary medicine." In its limited and best sense we understand by the term a remedy of which the ingredients and their proportions are made known to the profession, and the trade or proprietary name of which is alone protected by law. When such preparations are made exclusively for the use of the medical profession, and are advertised exclusively in medical journals, we cannot see any possible lowering of professional dignity, or deviation from "time-honoured principles of medical ethics" on the part of the physician who uses them in his

daily practice or who recommends them in his communications to medical journals. The name, in this class of proprietary medicines, is to be regarded simply as the guinea's stamp—a guarantee of the purity and genuineness of the product, and the registration of it; patenting it, if you please, is as much for the protection of the physicians who use it as for the parties who manufacture the remedy. It in no sense makes the drug a "patent medicine" any more than does the writing of "Fairchild" before pepsin, "Merck" before or after an alkaloid, or "Schering" or "Squibb" before chloroform, transfer these chemicals into that category. These men—Merck, Schering, Fairchild, Squibb, and a few others—have devoted their lives and spent enormous sums of money in making their products the purest and best that can be attained by human honesty and human ingenuity; and as a reward their names attached in copyrighted labels to their chemicals stand as a perpetual guarantee to the physician and patient against the fraud and greed of less honest manufacturers; and it would be a great injustice to them, as well as to the profession and public, to deprive them of this guarantee.

Clinical Cases.

THE STANLEY HOSPITAL, LIVERPOOL. REPORTS OF SURGICAL CASES.

BY ARTHUR H. WILSON (ASSISTANT SURGEON).

I. Congenital Cystic Hygroma.—Margery K—, æt. six, a healthy looking child, was brought with a lump about the size of a hen's egg under the right clavicle. The swelling was first noticed when the child was two years old, but recently had begun to enlarge somewhat rapidly. The arm seemed weak; the veins over tumour distended, and there were two translucent bluish spots, suggesting fluid contents; it felt lobulated, and seemed to be under the pectoratis major; no fluctuation; movable in an upward and downward direction, but not laterally. On October 19th, 1885, patient was placed under chloroform, a skin incision about two inches long made, and the pectoral muscle divided. The tumour was at once visible, resting on the ribs, and seen to consist of a bunch of cysts, none of them larger than a marble, the majority about the size of a pea. Nearly all the cysts were filled with clear serum, but some of the larger with dark blood-stained fluid. The tumour was firmly fixed to the clavicle, and its removal was tedious, partly with the knife and partly by tearing. A prolongation was traced towards the axilla, and at the end of it (about two inches from the main tumour) three large cysts were found and dissected out. The tumour appeared to be freely removed. Listerian precautions were taken.

Remarks.—The case did well, except that a large inflammatory swelling formed in front of the shoulder, but subsided under poultices. The prolongation into the axilla is of interest, as the child's friends stated that the lump first appeared in the arm-pit, and "moved up" under the clavicle. At the end of last year (two years since operation) patient showed no signs of recurrence.

II. Epithelioma of Scrotum.—John K—, æt. forty-eight, an engine stoker, admitted May 27th, 1887. Disease began about eighteen months ago as a wart, and was very irritable. Until three months ago it remained about the size of "an ordinary coat button," but since then has grown rapidly. It now presents a large ragged surface, about two inches by one inch, on the left side of the scrotum, the testicle being adherent. On the right side are two isolated growths of the same character, but of small size, the testicle being free. No enlarged glands in either groin, and none to be felt in the pelvis. On May 27th, the whole mass was freely removed, together with the left testicle, which was firmly adherent to

the growth, the cord being carefully freed and tied with strong catgut. Sufficient scrotal skin was saved to cover up the right testicle, a large drainage tube inserted, and salicylic wool dressings applied. The patient did well, and was discharged in a month. Up to the present time there is no sign of recurrence. *Microscopical examination* showed a typical epithelioma, with unusual abundance of cell nests.

Remarks.—This simple case of epithelioma of the scrotum seems worth recording as an example of true “chimney sweep’s” cancer occurring in a stoker. Among stokers on board ship, after a voyage of some duration, it is common to see men with sores and ulcers on the scrotum, groins, or inner upper-third of the thighs. My attention was first drawn to these through having invalidated a man for them, much to the indignation of his fellow-stokers, several of whom declared they were “quite as bad,” a statement which I was able to verify. Although in sweeps the disease is now less frequent, experience may show that among other workers in coal dust, the reverse holds good. On the fourth day of the after-treatment the wound became septic, and in this case—as in several others—immediate benefit was derived from the injection of iodoform in oil into the wound.

LEICESTER INFIRMARY.

NOTES ON NINE CASES OF COMPOUND FRACTURES OF LEG, AND TWO COMPOUND COMMINUTED FRACTURES OF FOREARM. ANTISEPTIC TREATMENT. RESULTS.

By J. B. OKELL, M.R.C.S., L.R.C.P. (HOUSE SURGEON).

J. M——, male, æt. twenty-three, a collier, was admitted May 12th, 1887, suffering from a severe compound comminuted fracture of tibia and fibula, about the middle third. The vessels being intact, it was determined to try and save the leg; so ether being administered, the wound was enlarged, in order to examine more thoroughly the injury. It was found that the bones were much comminuted, and periosteum stripped off for some distance. About an inch and a half of tibia, and several pieces of fibula which were found lying loose, were removed. The wound being well washed out with carbolic lotion (one in twenty), a piece of drainage tube was inserted, and the leg put up in a box splint, having been dressed with loose wool and the wadding (this kind of dressing was used in subsequent cases, together with carbolic spray). On May 14th, dressing was changed and the tube taken out. From this date the temperature remained normal throughout. This last dressing was not changed for nearly three weeks, when boracic acid lotion was substituted, as there was now a large healthy granulating surface, and some bare bone to be detected. In the middle of July he was just able to raise his leg off the splint. At the beginning of August the leg was put up in a well-padded Bavarian splint, with a window to allow for the dressing of a small sinus. On August 20th, he was discharged. At the beginning of September he was next seen, when it was found that he had crutch palsy. The sinus was healed, a piece of bone having come away. The paralysis was cured by the battery, after a month’s residence in the Infirmary. He was now able to get about with two sticks, but required the support of plaster case. At the beginning of December the leg was practically sound.

E. C——, female, æt. six, was admitted on September 20th, with compound fracture of tibia and fibula in the lower third, caused by some heavy logs of wood falling upon it. The tibia was protruding through the wound, and the peri-

osteum stripped up for some considerable distance. Chloroform being administered, the wound was treated as the preceding case. The dressing had to be changed next morning, as it was through, but not again for nearly three weeks, when wet dressings were substituted on the granulating surface. At the beginning of November a large scale of bone, measuring two inches, came away, when the wound rapidly healed up. On November 28th, the leg was put up in a plaster of Paris bandage, and patient was discharged next day. Next seen on December 28th, when the bandage was taken off, and patient was able to walk well, without any supports whatever.

E. B——, male, æt. seventeen, a very strumous lad, with enlarged glands in neck, was admitted on September 21st, with compound separation of epiphysis at lower end of tibia, with much protusion of upper end. Ether having been administered, the bones were reduced into good position by forcible extension. This was then treated as the preceding case, excepting that dressings had to be more frequently changed. The temperature varied between normal and 99.8. Notwithstanding his very strumous condition, firm union took place; but a small sinus was left, leading to some bare bone. On November 10th, the leg was put up in a Bavarian splint, with a small window for dressing; and on November 21st, he was sent to Scarborough Convalescent Home. On December 20th, he was again seen, and was able to walk on the leg, but the scale of bone had not come away. On January 13th, Bavarian splint taken off, wound entirely healed; free movement in ankle joint; can walk without crutches.

W. D——, male, æt. fifty-one, a collier, was admitted on September 23rd, with a compound Pott’s fracture, having great displacement of foot outwards. This was reduced by forcible extension, and treated as the preceding case, the dressing not being changed for fourteen days, the temperature keeping normal. It was found that the wounds had almost healed, excepting for some superficial sores, which healed in a few days with wet dressings. Firm union had taken place by November 9th, when the leg was put up in a Bavarian splint, and he was discharged on November 12th, being next seen on December 14th, when the plaster was taken off, and the patient was able to walk very fairly well.

E. C——, æt. forty-four, a collier, was admitted on October 4th, with a compound fracture of tibia and fibula at the junction of middle and lower thirds, with protrusion of upper fragment of tibia, and stripping up of periosteum. Ether being administered, the wound was enlarged, and by extension the bones were got into good apposition. This was then dressed as the preceding cases, but the dressing was changed next morning, as it was through. The temperature keeping normal, this was not changed for three weeks, when all was found healed, excepting a small sinus leading to bare bone, so wet dressings were substituted. Firm union having taken place, the leg was put up in a Bavarian splint, with a small window, on November 23rd, and the patient was discharged on November 26th. He was next seen on January 7th, when the wound was perfectly healed. The Bavarian splint was taken off, and the patient was able to walk on the leg.

J. H——, male, æt. forty-one, a waggoner, was admitted on October 11th, with a compound fracture of tibia and fibula at the junction of middle with upper thirds, with protrusion of upper end of tibia, and stripping off of periosteum. Ether having been administered, the wound was enlarged, and by

forcible extension the bones were brought into good apposition. This was then treated as the preceding cases, dressing being changed next morning, and a large clot of blood washed out. This dressing was not changed for three weeks, when the wet dressing was substituted. On November 23rd, he was able to just lift his leg off the splint; so it was put in a Bavarian splint, with a small window, and the patient was sent to Folkestone Convalescent Home on November 29th. He was next seen on January 6th, when there was firm union. The sinus had not healed up, but patient was able to stand about on the leg.

J. C——, male, æt. seventeen, a waggoner, was admitted on October 27th, with a compound fracture of tibia and fibula in the middle third, a simple fracture of femur on the same side, a simple fracture of inner third of clavicle of the opposite side, and some bruising of the abdomen, caused by a cart load of soil falling back upon him. Ether having been administered, the compound fracture was treated as the preceding cases, but dry dressings had to be discontinued in a week, as the skin on the leg had sloughed for some distance, owing to the bruising it had received. The femur was put up in a Bavarian splint, with a long outside splint from the axilla; the clavicle was treated as ordinarily, the temperature remaining normal throughout. On November 24th, good union had taken place in all the fractures, and the ulcer caused by the sloughing of the tissues, which extended half way round the leg, had taken on a healthy granulating surface. By the end of December, the ulcer had entirely healed, so the patient was discharged on January 4th, being able to get about well on crutches.

E. G——, female, æt. ten, was admitted on November 1st, with a compound fracture of tibia and fibula in the middle third, protrusion of tibia, and stripping up of periosteum. Chloroform being administered, the bones were brought into good apposition, and the leg put up as in preceding case. It was dressed next morning, as it was through, the temperature remaining normal. This was not changed again for nearly a month, when wet dressings were substituted, it all having healed, except a sinus leading to a small scale of bone. The leg was put up in a Bavarian splint on January 6th, and patient was discharged on January 7th, being able to get about well on crutches.

E. L——, male, æt. twelve, was admitted on November 25th, with a compound fracture of tibia in the middle third. Chloroform having been administered, a counter opening was made in order to afford better drainage. It was then treated as the preceding case. The dressing was changed on November 28th, and the drainage tube taken out. In two days more the dressing had to be removed, as it was through, but not again for fourteen days, as the temperature remained normal, when wet dressings were substituted. By the end of December there was firm union. One of the openings was all healed up, the other nearly so. The leg was put up in a Bavarian splint on January 9th, and patient was discharged on January 14th, wound healed, being able to walk with crutches.

C. H——, male, æt. nineteen, carter, was admitted on April 21st, with a compound comminuted fracture of radius and ulna. Ether having been administered, it was dressed as the preceding, in this case anterior and posterior straight splints being used. As the temperature was normal, it was not dressed for a fortnight, when the wound was found entirely healed up; and as the patient was most anxious to

get back into the country, he was discharged on May 7th. He was last seen at the end of June, when he had a very straight and useful arm, being able to follow his old employment.

E. L——, male, æt. twelve, was admitted on November 1st, with a compound comminuted fracture of radius and ulna. Chloroform having been administered, it was put up as the preceding case, but dressing had to be changed four times in the first three weeks, as patient was very troublesome. Temperature was normal throughout. Dry dressings were discontinued on November 21st. The wounds were all healed by November 29th, when patient was discharged with firm union of bones. He was last seen at the end of December, when the arm was very straight, and all movements unimpaired.

Reviews.

The Commonwealth; a Series of Essays on Health and Felicity for every day readers. By B. W. RICHARDSON, M.D., F.R.S. Longmans, Green, & Co.

DR. RICHARDSON might have taken as the motto of his book a sentence which occurs at the end of it, "We are educating politics, as well as men, by what we teach—an education which, in the present state of dense political darkness, is the noblest work we can possibly execute, until those who rule understand common human nature." Verily, when that which should be light in the common wealth is darkness; how dark is the darkness. This volume consists of twelve essays. It would be hopeless to attempt to present to our readers a *resumé* of their contents, we shall, therefore, confine ourselves to one of the subjects treated of, the education of the young, and let our readers acquire a knowledge of the others from the book itself. The author addresses himself professedly to lay readers; we are of opinion, however, that the information he has to give is quite as much needed by the majority of the members of the medical profession. We select the subject of education, because it is the most potent influence at present at work in determining the destiny of the English people. It is all but universal, and it is, on the whole, uniform in its character, so that it is in fact a huge experiment in physiology made, it must be said, by those who, by their training, are incompetent to attempt it wisely and well. It need, therefore, be no cause of wonder that Dr. Richardson, in common with numbers of other thoughtful men whose scientific training has been such as to give their opinion weight, considers that the Education Act utterly fails to provide a course of instruction suitable to the national requirements. The principal counts in his indictment of the present system are: that in it there is no provision made for the physical development of the pupils; that too long time is spent in intellectual work—three hours a day is all that, in his opinion, children should be required to spend in learning lessons, whereas they are kept at them for six or seven; and that they are not taught those habits of observation and neat handedness which are most necessary for those who are to be hereafter the mechanical workers of the nation. What Dr. Richardson advocates is the half-time system, according to which the children are employed for half their time in learning lessons, and the other half in learning some handicraft. It is a remarkable fact that under this system

children actually make more progress in the acquisition of knowledge than they had previously done when they were occupied double the time at lessons. Dr. Owen Rees, who has had extensive experience in these matters, writes, "The present system of National education produces a dislike and inaptitude for labour among the children of the working classes, which, unless altered, will, I fear, produce very sad results. The sudden change from schoolroom to workshop is the cause of many children being unable to bear the trial they are called upon to undergo, and hence they become idle vagabonds or worse. All the boys admitted into this school are quite unable at first to work, and seem to have had no possible previous training to prepare them for it. It is only after they have for some time enjoyed the advantage of our half-time system that they acquire any willingness to labour."

There is another aspect of the education question which has never received that attention it deserves. Intellectual perversity is not inherent in children in the same way that moral perversity is. That inheritance is a universal one, yet all education is directed to cultivate and inform the understanding, or at least is conventionally supposed to do so, while moral education is entirely neglected. It will no doubt be replied that, except in the schools of Secularists, religious education is given from day to day. But our answer is an appeal to facts. Bad as is the intellectual products of our schools the moral product is still worse. The majority of children leave the schools able to read and write—at least after a fashion—but what proportion through the influence of the schools grow up to be temperate and chaste, honest and truthful? If the country is to be saved from moral dissolution there must be an overturn in the system of teaching. The first thing to be done is to introduce the half-time system, and to make work a means of training to truthfulness and conscientiousness. The boy or girl who has learned to do the unseen side of a piece of work just as well as the one that is seen has got a better lesson in morality than if he had learned to say by rote, "Thou shalt not steal." The next thing is to have the schools so arranged that there shall be room in them for all kinds of wholesome games and amusements in which the children may be occupied under general superintendence. Who has not listened with mingled sorrow and indignation to a group of Board School children at play? The mutual accusations of meanness, cheating and lying, and the violent outbursts of temper which are displayed. The playground could be made a school of moral training of the best kind. Again the Board Schools ought to be utilised in the evenings as places of resort for young people who are passing from school into the businesses of life. The two great preservatives of young people from the snares and temptations of life are total abstinence and a taste for pure reading. This is the testimony of all whose judgment is entitled to weight in the matter. If every Board School was made the centre of a Temperance Guild, and was furnished with a good library, and if the scholars were trained to take the same kind of pride in their school as young men of the educated classes do in their college, and if it always provided a pleasant resort in the evenings, the social problem would be a long way nearer to solution. Young people who had received such a training would be prepared to appreciate the "People's Palaces," which ought to exist in every large city. Finally, Board Schools at which the children of the working classes are taught ought to be provided with

kitchens, in which tasty and toothsome dishes should be prepared by the girls and sold at cost price to the surrounding inhabitants. When public schools become training schools in the arts of domestic life there will be some hope that the future generation will not be so hopelessly incapable as the present. We commend especially to our readers' attention the chapters on *Health and Recreation*, *Health through Education*, *The Poverty of Wealth*, and *Upper and Lower London*. What Upper London is, our readers may guess. It is not the "upper ten." A. W. WALLACE.

The Hospital: a Weekly Institutional Journal of Science, Medicine and Philanthropy. A. P. Watt, 2, Paternoster-square.

To "ding down Tantallon and mak a brig to the Bass," used to be the Scottish mode of expressing the impossible. We had believed that "to make another medical weekly a success" was another, though less epigrammatic way of expressing the same thing; nevertheless "The Hospital" has found a site for itself in Paternoster-square, and has attained, we understand, a circulation of some ten thousand a week. Hospitals and nursing, hygiene and sanitation, are the topics chiefly dealt with, and the papers are written for the instruction of the general public, as well as for giving information to the profession. Most important papers have also appeared on the subject of Poor Law relief, and the best method of dealing with London poverty. Altogether we regard the journal as a note-worthy addition to periodical medical literature, and likely to have a wide-spread influence for good. It has for long been our conviction that the medical profession will never take its proper position in the social fabric until the public have some sound knowledge of the principles on which medical practice is carried on. At present there are so many fools to be answered according to their folly that medical men have become, in many cases, like unto them. None of us but must feel a certain amount of humiliation when we think on what our reputation as skilful doctors often rests. We have got credit where we did nothing towards the cure; we have got blame where it was wholly undeserved; and we have deliberately given opinions, like the Delphian oracle, because we knew that if we spoke out what we believed it would very likely be turned against us at some future time. We therefore hail with pleasure any public instructor who will take in hand the enlightenment of the "swinish multitude" as wisely as "The Hospital" is doing; but the work will never be done thoroughly till instruction in physiology and the principles of health become part of the necessary education of a gentleman, and when a blunder in a question of sanitation is considered more discreditable than making a false quantity in Latin. "The Hospital" has introduced the novelty in medical literature of a serial story running through it. We have heard that one of the earlier ones was of love-making between nurse and house physician, and that the matrons and medical superintendents of several hospitals declared that if it was continued they would banish the journal. Be that as it may, the *thing* goes on, and we know of a model hospital where nurses are strictly forbidden to speak to the residents, but some how or other almost every resident leaves *engaged*. Therein we think the young men show their sense. A good wife is more likely to be met with in the wards of a hospital than on the boards of a ball-room. A. W. WALLACE, M.D.

Outlines of the Grammar of Volapük: the Commercial International Language of the World, arranged for the Use of the Student of Languages, etc. By SAMUEL EADON, M.A., M.D. Bristol: Thatcher; London: Walter Scott.

THE reader will at once ask, "What is Volapük?" In consequence we presume of man's first disobedience, and the fruit of that forbidden tree, we have since spoken in divers tongues. Adam and Eve in the garden conversed in the one language then existing. Volapük is the name given to a new language, framed by a very learned clergyman, named Father Schleyer, of Constance, a distinguished linguist. He has availed himself of his learning, and founded these new words, which are part of the Volapük system. This is not a fancy language or a dream of an enthusiast, Father Schleyer has conquered all the difficulties. His system is now taught in America, France, Germany, Switzerland, Italy, Spain, Portugal, Holland, and Volapükists are now very numerous. Dr. Eadon has taken up the study and warmly advocated it in England, and we shall probably soon hear of its introduction into England on a large scale. To facilitate this Dr. Eadon has issued a small grammar, indeed, the fault is that the grammar is too small, as it only gives an outline of the system. We shall probably have soon another work from his pen, more explanatory and complete, with a Volapük dictionary. We give a few samples of the language:

Good-day, Sir	..	..	Glidi Söl.
How are you?	..	..	Liko Stadois?
Good-bye	..	..	Adyo.
How is your father?	..	..	Liko fat olsik Stadom?
Do you study Volapük?	..	..	Li Stadols Volapüki.

The grammatical construction of the language appears very simple and can be easily mastered. Volapük is intended to be an international language; to be chiefly used in correspondence; to take the place of Latin amongst the learned and the scientific of all countries. Dr. Eadon says: "Diversity of language is felt to be a great barrier to international intercourse. Volapük, however, is not intended to destroy that diversity, but to supplement it by the introduction of a neutral, or unnational language which the people of all nations may learn, without wounding pride or national jealousy. Its invention was never meant to supersede any present dominant living language, but to be acquired, in addition, to the mother tongue of every people. In these modern times a new order of things has grown up. There are now international congresses, international post-unions, international cables, international canals; and all these, and many more, are in operation, without interfering, in the smallest degree, with the national autonomy of the different nations concerned. So Volapük, an international, but scientifically constructed language, will, in a similar manner, range itself alongside the living languages of the world without interfering with, or affecting injuriously, in any way, their autonomy, or requiring them to pass off, in a sort of lingual 'dim eclipse,' or, perhaps, vanish altogether and be lost from human memory."

Short Notices.

De L'Electricité Comme Agent Therapeutique en Gynecologie.
Par le Dr. F. Mundé, pp. 72. Paris, 1888.

THE author of this treatise is a distinguished obstetrician in New York, where he holds hospital appointments, and

is professor in gynæcology. Under his auspices the work has been translated into French by Dr. Menière, to meet the want of such an essay. "No work on gynæcological electrotherapy," the translator observes, "has yet been published in France," the various treatises on medical electricity, passing over the diseases of women. In this manual it is intended to supply the practitioner with information on the various forms of electrical apparatus, together with the indications for their employment. The most serviceable forms of galvanic and Faradaic apparatus, together with their general method of employment are described. Descriptions of various forms of electrodes are given and accompanied by illustrative drawings. A large share of this work is taken up in enumerating the affections of the female sexual organs in which electricity offers a prospect of successful employment. The use of electricity the author observes is contra-indicated in acute or subacute inflammatory affections of the pelvic organs, but it may be used with advantage in the form of *Faradisation*, in cases of imperfect development of the uterus and ovaries; in amenorrhœa, sub-involution, menorrhagia, uterine displacements, and uterine fibroma. *Galvanisation* is suitable for uterine hyperplasia, chronic inflammations, neuralgia, dysmenorrhœa, etc. The Faradaic current, by its stimulant properties, augments the nutrition and vital functions of these organs; the galvanic current is to be employed where it is required to promote the absorption of adventitious products. Generally, it appears that the pathological conditions in which the action of electricity is most evidently beneficial is where other modes of treatment have failed.

W. B. K.

Digestion and Indigestion. By De Quintin. Leicester: Provincial Medical Journal Office.

ARE we becoming a nation of dyspeptics? We may well ask this question in view of the thousand and one remedies recommended in the advertising pages of the medical and lay press, and of the increasing literature on the subject of indigestion. Another question, if infants are brought up on peptonised and pancreatised foods, if they are not called upon to digest, except artificially, what will be the consequence in another cycle? Disuse of an organ causes atrophy. We leave this question to turn to the pages of the *brochure* before us. It is difficult to condense into fifty-eight pages such a wide subject as digestion and indigestion, but the author has succeeded in bringing together in a small compass a mass of practical suggestions dealing with various conditions of disturbance in the gastric functions to which the generic term indigestion is commonly applied. The pamphlet might be more fitly termed an *aide memoire* to the various affections treated of. Amongst the subjects included in the pamphlet, are vomiting, hæmatemesis, sea sickness, vertigo, dilatation of the stomach, gastritis, gouty, duodenal, strumous and ovarian indigestion, ulcer, cancer of the stomach, gastralgia and stomatitis, all of which are considered from a practical standpoint, the *brochure* being opened by a few sound pages on normal digestion. We note with approval one point—viz., the author's avoidance of recommending patent medicines, and his adherence to the old-fashioned system of prescribing for symptoms. A series of numbered formulæ, sixty-seven altogether, selected with judgment, accompany the pamphlet, and will be welcomed by the reader.

The Provincial Medical Journal,

FEBRUARY, 1888.

OUR American exchanges furnish us with particulars of a very important discussion at the Academy of Medicine, New York, on November 17th, on the subject of "Cardiac Murmurs." The opinions expressed by several speakers will not be absolutely shared by English observers, though there will, we think, be a general agreement that certain cardiac murmurs are without great pathological import, and have been too hastily pronounced of primary importance. Dr. HEINEMANN introduced the debate by asking what constituted a cardiac murmur? and what did it signify? A murmur was defined as an abnormal sound developed in the heart or blood vessels, and the changes in the heart's normal sounds were those of exaggerated intensity, diminished intensity, and duplication; but these changes accompanied not only the normal sounds, but pathological conditions of the heart. He stated that hæmic murmurs were heard at the base as well as the apex, contrary to the view of HAYDEN. Dr. HEINEMANN described the various murmurs heard in health and disease.—Dr. A. L. LOOMIS said that the more one studied cardiac murmurs the less reliance would be placed upon them as positive indications of any cardiac disease which prejudiced life seriously. The murmurs spoken of as friction endocardiac, were not due to friction. Cardiac murmurs were vibrating sounds produced within the blood current. All the true hæmic murmurs were heard as often at the apex as at the base. The great question to be determined was the condition of the cardiac wall. With regard to organic lesions of the heart, when there was stenosis, and also changes which permitted regurgitations, the significance of those murmurs was not determined by their point of maximum intensity, area of diffusion, or by any quality they possessed, but entirely by the amount of cardiac dilation which might be present, the cardiac hypertrophy which might accompany them.—Dr. A. H. SMITH thought the tendency had been to exaggerate the importance of cardiac murmurs *per se*.—Dr. F. S. BURT believed that some cardiac murmurs were so often associated with definite lesions, that they were of great assistance in making a diagnosis. Murmurs existed without cardiac disease, and grave cardiac disease might be present and no murmur produced; but the diagnosis should be made on the history and symptoms, together with the condition of the cardiac muscles.—Dr. FRANCIS DELAFIELD said there had been too many descriptions and too many explanations of cardiac murmurs. It would be very satisfactory if all could have the same idea as to what a cardiac murmur was. His own feeling was that the way to solve the problem was to be as strict as possible, and not to call any sound a murmur unless it was a new sound added to the normal sounds.—Dr. KINNICUTT's experience coincided with that of Dr. LOOMIS with regard to the site of the murmurs of anæmia. He believed they were heard almost as frequently

at the apex as over the pulmonary area; he was convinced that any differential diagnosis between a functional and mitral regurgitant murmur, based upon the dictum laid down in both text books, that the latter alone was conducted to the axilla and the angle of the scapula, must often be incorrect, as the induction of the murmur depended largely upon its intensity. He asked Dr. DELAFIELD if he had any method of distinguishing between a mitral functional and a mitral organic murmur.—Dr. DELAFIELD replied that he knew of no way of distinguishing by the murmur, but was guided altogether by other considerations.—Dr. JACOB thought that diagnosis of chronic heart disease should not be made unless there were changes in the size of the organ, for there were organic sounds which disappeared, and children with adventitious cardiac sounds might get rid of their systolic murmur.—Dr. J. C. PETERS said that he had no doubt that many children were frightened to death by physicians.—Dr. R. C. M. PAGE was satisfied that almost any heart murmur might be heard at almost any part over the chest.

Dr. C. L. DANA gave a new turn to the discussion. He said that one important practical question to be decided was whether these children should be allowed to engage in athletic sports, such as the common sports of school-life and boyhood. So far as his experience went, indulgence in them was beneficial, when regulated by the character of the lesion and the general condition of the patient.

Dr. KINNICUTT said that graduated physical exercise largely entered into the present method of treatment of organic disease of the heart in Germany, and the best results were claimed for it. He personally believed that carefully regulated athletic sports were not contraindicated in many cases.

Dr. DELAFIELD regarded the point made by Dr. LOOMIS concerning the presence of cardiac murmur in children, and the development of serious symptoms when the degenerative period in life was reached, as well taken and one that was true, yet he doubted if that were the entire truth. It seemed to him that the question took a rather wider range than that. It was unquestionably true that children who had had endocarditis did very well for many years, and when they got old cardiac disease developed. On the other hand, it was equally true that a great many developed endocarditis when adults, and went on many years, until they reached the same period in life and then they began to suffer. The same was true of pulmonary emphysema, and also of the atrophic form of chronic Bright's disease. Patients suffering from either of those affections might go on in fairly good health until they reached the same period in life, and then have serious trouble. Did not all this mean that persons who suffer from this particular form of chronic inflammation might, if the inflammation had developed slowly enough, experience no trouble until they reached this hazardous period in life, when the same lesion would cause a great deal of trouble? He was rather disposed to place these

children's cases not by themselves, but regard them as another part of the same general rule.

Dr. A. H. SMITH thought that so long as the muscular exercise could be graded it might answer to allow children with cardiac disease to participate in school sports, but he was unwilling to allow a boy with cardiac insufficiency to take part in rowing matches, etc., where he would be obliged to go through with his duty at all hazards.

The Chairman referred to five men who did well as the result of engaging in the ordinary sports of college, but not rowing matches or violent games.

Dr. KINNICUTT said that by athletic sports he meant the usual outdoor sports of children and youths. He certainly would forbid a patient suffering from organic disease of the heart to engage in the athletic *contests* of the present day.

Dr. HEINEMANN said that the particular point which he wished to reach was an agreement as to what shall constitute a cardiac murmur. He thought it would be agreed to, that only such sounds should be considered as cardiac murmurs as were *adventitious*, and not changed heart-sounds. He then spoke of thrill—the diagnostic value of which he regarded as questionable. He also referred to the case of a long-shoreman, sixty-nine years of age, who carried a murmur fifty-two years without special inconvenience. In the light of such cases the significance of cardiac murmurs must still remain an open question. An important point to be decided was, when shall we say that a given sound is not an accentuation, but a cardiac murmur, and when not a murmur, but an accentuation? He thought it probable that in solving the problem it would become necessary to invoke the aid of the sphygmograph and other instruments of precision.

We have condensed this report from the *New York Medical Journal*. Those of our readers interested in this important subject would do well to obtain a copy of the *Transactions* of the New York Academy of Medicine, and read the report in full.

THE general practitioners may justly exclaim, "Save us from our friends," in view of the scheme now on foot to establish provident institutions in the metropolis. It is time for those who are in general practice to speak out, and in every way resent the action taken by those philanthropists, who in their anxiety for the welfare "of the industrial classes," entirely ignore the interests of the other class who have suffered already, and who will suffer, from the false sentiment which has so long dominated the practice of medicine. It is our duty and privilege to minister to the poor and to the afflicted. We recognise this, but we draw the line. It is not our duty to attend all classes gratuitously, or at unremunerative fees. Our medical charities have been so long abused, and the evils have been so long recognised, that it is late in the day now to dwell upon these abuses, but we are forced to take up this subject by the proposed extension of provident dispensaries in London. Calculations, not contradicted, tell us that a million or so a year receive free medical aid in London.

That represents a noble share in beneficence on the part of the profession. Let us assume that the million are deserving of this help from the profession; we wipe out the loss it represents, hoping that it will be debited to the credit of the London practitioners in the great account book. In what we have to say we hope we shall not be misunderstood. We feel sure that those who have started this scheme have been actuated by the purest motives, and that they really believe they will in this way benefit the general practitioners. We think, however, this is a question on the merits of which general practitioners alone can decide. It is difficult for men in excellent consultant practice, who receive their guinea fees, to understand the mode of livelihood followed by the general practitioner in such a metropolis as London, or in our large towns and cities. Every new provident institution cuts off the source of supply. A few men by an enormous amount of work, under the provident scheme, will be able to earn a bare living, but the bulk of the profession will suffer. If we apply the principle to a small town, we shall see how the provident system will work. In a town like Halifax, of 80,000 inhabitants, there are about thirty medical men; 70,000 probably represent the working classes. A few medical men have the practice amongst the 10,000 rich; the bulk of the profession have to get a living out of the 70,000 operatives. The operatives have good wages, and can pay 2/6 fees. Provident dispensaries at 6d. and 1/-, if started here on the London principle, would utterly ruin the practitioners, who are now able to live in fairly good style on the fees willingly paid by the industrial classes. On this point the almost unanimous opinion of the general practitioners is in favour of our view. The same reasoning may be applied to London. We unhesitatingly condemn the whole scheme, and we hope that the general practitioners of London will be wise in time, and also resist it. We were in favour of provident dispensaries *at first*, because we hoped that they would take the place of the out-patient departments of our hospitals; but so far from doing so, the out-patient departments flourish more strongly than ever, and public and sham provident dispensaries also thrive. What with hospitals, clubs, private dispensaries, public dispensaries, poor-law dispensaries, sham provident dispensaries, from what source is the general practitioner to derive an income? Will the general practitioner allow himself to be swamped in this way? We regret we have to oppose such men as Sir ANDREW CLARKE, Sir SPENCER WELLS, Mr. HOLMES, and others, but we are convinced that they are on the wrong side of the hedge, and we have no respect for "authority as authority."

We venture to assert that the originators of this scheme are beginning at the wrong end, that in place of lowering the fees obtainable by the hardest-worked class of the profession, they should begin by raising the standard of fees amongst that class who are the least worked. What is wanted may be summed up as follows:—The leaders in medicine, as Sir ———, should charge no less than three guineas for a consultation; this would relieve the

impoverished state of the younger consultants, who according to *status* should either charge £2 2s. or £1 1s. Hospital surgeons and physicians in all towns should raise their fees, and should not take less than 5/-; this would enable the younger men to compete with them, and they would be able to obtain 2/6 fees from the industrial classes, who are in as good a position to pay now as at any time during the last twenty-five years. We must make provision for the really poor. That provision amply exists. Moreover, in private practice each medical man can best show his generosity by attending gratuitously any deserving poor he meets with. The most clamorous are not the most deserving. A clerk with 25/- a week, or struggling young professional man, architect, painter, etc., with large families are the most deserving, and such opportunities of doing good fall to the lot of most of us. It is for these classes we have the fullest sympathy, because they hide their claims for consideration. The reforms needed should proceed on these lines, and not in the lowering direction. The general practitioners have the matter in their own hands. If they are content with the scheme, then there is nothing more to be said.

“How am I to distinguish the skilled from the unskilled man? I have no means of judging; all doctors seem alike to me. If a man calls himself ‘doctor,’ I am bound to believe him. I was under the belief that the Government did not permit any man to practise who was not qualified?” This was the remark addressed to us the other day by a patient who was disgusted to find that in an emergency he had called in an individual who, known as “Dr.,” actually possessed no qualification whatever. An article in our January number, on “The Medical Man of the Future,” bewailed the increasing higher general culture of medical men, and the miserable pittance which in practice they are compelled to accept. It is true enough that medical men are inadequately paid as a rule, but who are more to be blamed than themselves for such a state of affairs. The article in question alluded to improved sanitation as diminishing sickness, to increase of popular medical literature, to increased sale—and facilities for sale—of patent medicines; these may certainly have some influence in reducing work and income, but it cannot be pleaded that they *lower fees*. Who can be supposed to look after the interests of a profession which will persistently neglect to do so for itself. The apathy of the medical profession in matters of presumably the most vital interest is almost incredible. With abuses bristling all around, they sit still and grumble, but when asked to co-operate with others to obtain redress or reform, they take no notice. A kind of unwritten law exists, entitled, “The Etiquette of the Profession,” but how is it carried out? Where is the tribunal to decide whether it has been infringed or not? There is no acknowledged judicial body to deal with such a matter. In the sister professions of divinity and law, offenders are called in question directly, but in medicine, except for the occasional

expression of opinions of anonymous correspondents in a few medical journals, there is nothing at all approaching a legislative body. There is a General Medical Council, but so far as any participation in the practical every-day life of the practitioner is concerned, it might as well not exist. The exigencies of the profession necessitate competition to such an extent, and of such a character, that unanimity is destroyed. The practice of bribing (for it is nothing else) patients to come by charging less than one’s neighbours is largely on the increase; it smacks very much of the pernicious trading habit of underselling. The existence of such a practice simply places etiquette on the shelf, and, as a matter of experience, when any breach of etiquette is complained of, it will be found in the majority of cases to be merely an example of what an American author pithily describes as “the golden rule applied to others.” Unqualified practice abounds, and is increasing, but no steps are taken to deal with it. Quite apart from any bearing on the welfare of the medical profession, this, as we have formerly pointed out, is a social evil, as the health of the nation is concerned by it. If such high qualifications and extensive training are required to render a man legally capable of treating disease, how can unqualified men do the same thing successfully? Either medical education and legal qualifications are a necessity or a farce. It is true that the sale and advertising of patent nostrums is on the increase, but what is this but a deliberate fraud sanctioned by the Government? Let anyone read the puffing and extravagant laudation in our public press day after day of quack medicines, with such headings as “Doctors set at defiance;” “After six doctors failed to cure,” and so on, and ask themselves the question whether this is not showering contempt upon the profession. Let none imagine that such things can be overlooked as harmless; they are begetting the idea that the medical profession is merely pretentious. People who read such things day by day believe them, because they are allowed to go unchecked. They think that as there is a “Medical Council,” which does not interfere in such cases, therefore they are sanctioned by that Council. It is a natural inference which cannot be avoided under present circumstances. How are such things to be prevented? Easily, we reply: let the profession combine to make their views, desires, and wrongs known—to exert pressure on the Medical Council—to support parliamentary action—to make the Government aware of the true state of the case, and the remedy will be soon forthcoming and that effectively. But unless the profession awake to the necessity of doing something for themselves, they will day by day get into a worse position, and sink to a state of less importance in the eyes of people than they even now occupy.

No FACT has ever been more clearly proved, beyond the possibility of doubt, than the effectual prevention of small-pox by vaccination. To urge that in many cases small-pox has occurred subsequent to vaccination, goes

for nothing, as this is at once met by the assertion that the vaccination was imperfect, or most probably made with inert lymph. With compulsory vaccination on the Statute Book, it seems a most extraordinary thing that small-pox should ever occur in this country, yet for at least ten years it has been constantly present with us, sporadic in occurrence, rising and falling; sometimes approaching an epidemic character; at others limited to a case here and there; still it has never been absent. At Sheffield, during the last few months, an epidemic of a serious character has occurred, and is extending. Again, the whole question of the value of vaccination will be raised, and freely discussed. Attempts will be made to inflame the popular mind by ignorant demagogues and sentimentalists; every dereliction will be dragged to the front; every result of want of care adduced as a statement of absolute fault; every consequence of failure to enforce the law paraded as a failure of the efficacy of vaccination. What such antagonists rely upon chiefly is the allegation that notwithstanding "Compulsory Vaccination," small-pox keeps recurring; and they point to the occurrence of small-pox in innumerable cases where some form of vaccination has been practised. We use the phrase "some form" advisedly, because it will be found that in such cases the vaccination has not been thorough and complete; that is to say, whereas proper vaccination will prevent the inception and development of the small-pox contagion, any *failure in the quality of the lymph* employed will not produce the immunity desired, notwithstanding that it may be followed by the production of a well-developed and apparently normal pustule. Vaccination, in its proper or strict signification, means the introduction into the human system of the lymph obtained from the pustule of vaccinia or cow-pox, and this was Jenner's practice; but it came to be assumed that because—notwithstanding after passing through various human systems successively—the lymph continued to produce a good pustule, its protecting power remained unaltered. That this view was correct is more than doubtful, as it seems only reasonable that the vaccine poison should, by this passage through, and contact with, so many human constitutions, become to some degree modified in character, and not improbably changed altogether in its nature. Certain it is that in all those cases where, subsequent to vaccination, small-pox has occurred either in a modified or full degree, investigation, where it could be made, has elicited that the vaccine lymph originally employed has been humanised; while observation, especially since the epidemic which traversed the whole country in 1870, has proved that the lymph used, as was frequently done, from secondary or re-vaccinated cases, was found to have wholly lost its protective character, notwithstanding that in such cases it might have been taken from a primary human source. It is only fair to conclude then, if vaccine matter from secondary cases becomes thus deprived of all specific protective power, that even after passing through a primary case, it must inevitably lose to some degree its full antagonising power. Accepting this

view, it can very easily be understood why in so many cases where vaccination had been apparently well done, so many instances of the occurrence of small-pox should have been observed. On the other hand, in no instance can the occurrence of small-pox be pointed out after the successful use of pure and unmodified calf-lymph, more especially in cases where it has been used for re-vaccination. A further strong point urged by the opponents of vaccination, and one to which we feel compelled to give attention, is that lymph, however pure in its source, acquires by its passage through the human system a human character, and becomes imbued with any constitutional tendencies which may be present, and so liable on its introduction into another human organisation to import these tendencies, which may be those of serious morbid conditions, and more especially of affections such as tuberculosis, syphilis, and other ailments having a specific character. Many facts have been adduced to support this serious charge, which it is difficult, indeed almost impossible, to set aside. Be its correctness as it may, it has sunk deep into the popular mind, and with an increasing tendency on the part of the population to resist compulsory vaccination, the Government will soon find themselves face to face with the alternatives of either enforcing the Vaccination Act, or letting it fall into abeyance. That the latter should be the course adopted, will never be the case, we feel certain; common sense and experience are against it, and therefore it will be necessary to render the enactment more stringent in its provisions. But in doing this it will be only right that every presumed or probable cause of objection should be removed. While on one hand the rational portion of the community have a right to insist on the enforcement of the Act, on the ground of objection to permitting any person to constitute himself or his family a focus of such a dangerous malady by non-compliance with a just enactment; on the other, the objectors have a right to demand that if their children must be vaccinated, they should have only pure lymph used, free from any human contamination or chance of introducing disease to presumably-healthy constitutions. To do this there is only one course open—namely, to forbid vaccination with any but pure calf lymph, to abolish all arm-to-arm vaccination, and to inflict an exemplary punishment for non-compliance. Were this made the law, we feel convinced we should hear no more of opposition to such a salutary and wise statute. We feel bound to observe that the existing mode of public vaccination calls for strict investigation, efficient superintendence, and wide reform. In too many instances there is gross carelessness in the selection of cases from which lymph is taken to vaccinate others—and in saying this we cast no reflection on our public vaccinators as a body; only it must be remembered that if but two or three per thousand of them are culpably careless and negligent, the results may be sufficiently disastrous to lend justification to an agitation which, if it should succeed to such an extent as to lead to any abrogation of, or evasion of such a beneficial Act, would be nothing less than a deplorable national calamity.

Annotations.

"Forsan et hæc olim meminisse juvabit."

OUR CONTRIBUTORS, 1888.

WE publish in this issue Dr. Steavenson's first contribution on the subject of "Electro-Therapeutics," a form of treatment rapidly coming into use, and one which the general practitioner can find a legitimate use for. Dr. Steavenson aims at making his papers practical. Amongst many contributions promised we may particularly allude to the following:—"On the Treatment of Sterility," by T. More Madden, M.D., etc. "A Year's Work at the Samaritan Hospital," by Geo. Granville Bantock, M.D. "Some Notes on the Management of certain Uterine Cases," by Gordon Black, M.D. "On the Etiology of the Pathological Conditions in Women, which have their Origin in the Pelvis," by John F. Le Page, M.D. "Obstruction of the Common Gall Duct, and difficulties in its Diagnosis," by Andrew Scott Myrtle, M.D. "Obscure Cases of Cancer," by J. A. Myrtle, M.B. "On New Surgical Appliances," by Dr. Ward Cousins. "Pine Baths and Inhalations as Adjuncts to Climatic Treatment of Laryngeal Diseases at Bournemouth," by Lennox Browne, F.R.C.S. "Diphtheria in the Puerperal State, and Infants," by H. Alderson, M.D. "On Orthopædic Subjects," by Robert Jones, M.R.C.S. (Liverpool). "The Treatment of Fractures of the Patella," with illustrations, by Hugh Owen Thomas (Liverpool). "On the Eye as an Optical Instrument," by James Rose, F.R.C.S. "Ophthalmic Notes," by Charles Lee, F.R.C.S. (Liverpool). "Diseases of Children," by Charles Macalister. "Infanticide," by Francis Vacher, F.R.C.S. "Ovariectomy in Aged People," by Fancourt Barnes, M.D. "On Retroversion of the Uterus as a Cause of Retention," by W. D. Spanton, Esq. "The Varieties of Gastrodynia," by Robert Saundby, M.D. "On the Utility of Massage," by W. R. Thomas, M.D. (Sheffield).

We are also promised original papers by Herbert Page, M.A., M.D., London; Dr. E. Aust. Lawrence, Lecturer in Obstetrics and Gynæcology at the Bristol School of Medicine; Dr. G. Oliver (Harrogate), Mr. Lawson Tait, Mr. Oliver Pemberton, Dr. Barr (Liverpool), Mr. George Buckston Browne, Dr. Charles Phillips, etc., etc.

TO OUR ADVERTISERS.

"THE mere number circulated of a journal is not the only, nor always the best, test that should guide an advertiser. Some journals, owing to the peculiar character of their circulation, would be far more profitable to an advertiser with a circulation of one thousand, than others with a circulation of ten thousand. This is particularly the case with class journals."—"Sell's Dictionary of the World's Press." To this we would add that for journals like the *Provincial Medical Journal*, the circulation is much larger than the number printed; as copies are handed from one to another,

exchanged, and otherwise made to do duty several times over, so that we can almost promise our advertisers *20,000 readers each month*, as this journal is read by at least five medical men for each copy issued.

THE DANGER OF MONEY.

WE are often told that money is the root of all evil, but most people are willing to run the risk so long as they obtain the root. Money may become a means of spreading disease, though few people attach much importance to this danger. Dirty coppers, which have come through hands not of the cleanest, are taken up by dainty fingers; silver and gold which have passed through hands affected with small-pox, scarlatina, syphilis, are exchanged from one to another, without any thought, or even fear of infection. Paper notes, dirty, soiled, crumbled, and even foul smelling are readily taken in exchange. Few people would think of washing coppers, silver, gold, but that such a course of treatment is necessary there cannot be a doubt. We have lately had attention directed to the danger of books from free libraries, but this is infinitesimal with the possibilities of infection opened out by our coinage. Dr. E. Miller Reid (*Med. Reg.*) thus graphically describes the danger:—"Money leaves the press or the mint, pure and undefiled, to become a nidus of infection and a colporteur of disease. It leaves the desquamating hand of the scarlatinal patient to go to the hand or mouth of the healthy child. It is taken from beneath the pillow of the variolous sick and given to the unsuspecting merchant, mechanic, and labourer, or innocent lawyer. It is cut from the rags of the leprous beggar, to find its way into the pocket of a member of the Legislature, or a minister of the Gospel. It goes from the foul bootlegs of thieves and burglars, to be carried by the timid cashier to Canada. I have seen it in the hands from which was dripping the infectious discharge of a blennorrhœa, and have shivered as I have thought that in a short space of time, that same note or coin might be pressed to the cheeks, lips, mouth, or eyes of some pure girl or woman, whose very purity would render her but the more susceptible of the contamination. I have seen it passed into circulation from the sick-room, by fingers that had just been removed from a specific sore, and when an hour or so after, I saw a thoughtless lady put a note into her mouth while she buttoned her glove, I should not wonder if it might not be similarly polluted. It is taken from the infected bosom and stockinged limb of the magdalen to be carried within the gloves on the clean palms of our mothers, daughters, and wives. It is the travelling companion of Asiatic cholera, and a sojourner with Yellow Jack. I will not speak at length of its odour; it is sufficient to mention that that it has enabled mail robbers to discover the presence of money in letters. No one who has a cut or abrasion is safe in letting a note or coin come in contact therewith. Let any doubter of this assertion be answered by the spirit of the bank official who lost his life in consequence of disease contracted by moistening his fingers at his mouth while counting bank-notes."

THE HENDON COW DISEASE.

PROFESSOR CROOKSHANK introduced an important communication to the Pathological Society at the meeting of the 15th December. It will be in the memory of our readers that considerable alarm was excited some months back by a report presented to the Local Government Board, "on certain observed relations between scarlatina in various districts of London, and milk supplied from a dairy farm at Hendon." Mr. Power and Dr. Klein were deputed to make enquiry into the matter. The results of their enquiries have been brought before the public in the Fifteenth Annual Report of the Local Government Board, and in the pages of the medical journals. These results were sufficiently alarming, but not presenting an absolutely definite conclusion, they have been further investigated by Professor Crookshank, whose conclusions have relieved them of much of their dangerous characters. Dr Klein states that by inoculation of matter from the sores of an affected cow, a positive result was obtained in four calves, the inoculated places having become sores, showing vesicles and forming scabs. By cultivation a strepto-coccus was obtained, identical with the virus of the cow disease. Further, that by subcutaneous injection of the strepto-coccus a general disease was produced, *bearing in many respects a close resemblance to human scarlatina* (the italics are ours). "Furthermore," Dr. Klein observes, "as respects the concern that cow's milk may have in the communication of disease . . . it would seem that the pure milk does not contain the organism, but that the milk during the act of milking is pretty sure to become contaminated by the fingers of the milker bringing down into the milk particles from the ulceration on the teat. The organism contained in these particles would find in the milk a good medium in which to multiply." So far, however, as the spread of scarlatina by the cow disease is concerned, we may divest our minds of fears on this score after a perusal of the report of the examinations by Dr. Crookshank. The careful study of Dr. Klein's descriptions of the disease, and comparison of these with those of Dr. Crookshank, will go far to show that there is every reason to believe that an erroneous conclusion has been arrived at by Mr. Power and Dr. Klein, highly valuable as are their bacteriological illustrations of the affection amongst cows.

The Hendon cow disease, brought before the meeting of the Pathological Society, on December 17th, 1887, is placed in a different light from which it is regarded in the Report of the Local Government Board. Dr. Crookshank, shows that it has all the characters of vaccinia, and some of those of scarlatina; while there was an absence of the latter disease among the consumers of the milk on the farm, in the village, and in the neighbouring town, numbering all together about fifteen hundred or two thousand individuals, one hundred and sixty animals having contracted the disease. There was no epidemic in the town district where the milk was distributed. Dr. Crookshank was able to examine the case of a boy, whose face at once confirmed his suspicions

that the disease of the tests of the cattle was the true Jennerian cow-pox. On further enquiry he met with numerous instances of the communication of the disease from the teats of the cows to the hands of the milkers. The occurrence of scarlatina in London at the time must, therefore, be regarded simply as a coincidence, its course being unknown. The cultivations performed by Dr. Crookshank having yielded results similar to those by Dr. Klein, there remains the inference that a strepto-coccus, capable of setting up septic inflammation, occurs in scarlet fever, diphtheria, puerperal fever, improperly preserved milk, and perhaps foot-and-mouth disease, in scarlatina, and other febrile diseases. We have herein placed before our readers a probable solution of the fallacies and fears that beset the supposed extension of scarlatina by milk. The practical outcome of Dr. Crookshank's remarks is that prompt measures should be enforced for isolating diseased animals, to prevent the spread of disease.

THE CROWN PRINCE AND HIS CONSULTANTS.

SIR JAMES PAGET in a lecture on "Dissection Poisons," said: "Sir William Lawrence used to say that he had not known anyone recover on whose case more than seven had been consulted. Our art has improved. I had the happiness of being attended by ten—Sir Thomas Watson, Sir George Burrows, Sir William Jenner, Sir W. Gull, Dr. Andrew, Dr. Gee, Mr. Cæsar Hawkins, Mr. Savory, Mr. Thomas Smith, and Mr. Karkeel. In this multitude of counsellors was safety." Sir James Paget was fortunate no doubt in having consultants who were all agreed on a course of treatment. The Crown Prince, on the other hand, as far as we can gather from the medical journals, had as many consultants who illustrated the truth of the adage, *tot homines, tot sententiæ*. Fortunately, he had the wisdom to trust to one adviser, and so far time has justified Sir Morell Mackenzie's course of treatment.

SMALL-POX IN THE PROVINCES.

SEVERAL of our provincial towns are filled with small-pox patients, and several others have only escaped through the vigilance of the sanitary authorities. Tramps have been the means of spreading the disease from one town to another. At Halifax on December 29th a tramp arrived from Hebden Bridge covered with small-pox eruption. He was fortunately within a couple of hours placed in the Small-Pox Hospital; otherwise he might have set up an epidemic. Another arrived at Halifax on the 20th, and was taken to the Workhouse suffering from rheumatism. On December 30th the small-pox eruption appeared. He had come from Leeds. Both cases are now well, and the only ones that have been in the borough. At the present time there is every opportunity of trying the application of a solution of sulphide of calcium to mature the eruption, and to give ease. We have used the remedy in several cases with benefit. The first case above mentioned was a severe one of confluent small-pox. The face was swollen; the

eyes closed. The face and body were painted with the golden lotion known as liq. sulph. cal. (the specific for scabies), weakened with water 1 to 2. The remedy was effective. The pustules shrivelled up, the face settled down, and the man was soon able to open his eyelids. We believe it may be applied in any stage of the disease; this has yet to be tested. As regards tramps, it is a matter of regret that the Local Government Board cannot issue an order, "detaining all tramps, found in workhouses on a certain day, for three months."

BOLSTERING UP THE SYSTEM PASTEUR.

"WHAT is truth," saith jesting Pilate, and waited for an answer. We may ask the same question when we read such evidence as the following in the *British Medical Journal*, December 31st, 1887, p. 1445:—

"In all, or nearly all, those fatal cases where Pasteur's anti-rabic treatment has been pursued, the patients had allowed a week or longer to elapse between the occurrence of the bite of the *rabid animal* and the commencement of the inoculative treatment."

Who could have written such a paragraph in the face of the evidence furnished by the Institute itself! Look at the following failures:—

Jammot bitten	Aug. 3rd.	Treated	Aug. 4th.	Died	Sept. 24th.
Saulat	July 9th.	"	July 9th.	"	Aug. 4th.
Marchois	July 3rd.	"	July 5th.	"	Aug. 16th.
Penichaud	June 12th	"	June 14th.	"	Aug. 19th.
Gerard	Dec. 1st.	"	Dec. 3rd.	"	Jan. 3rd.
Rouget	Oct. 20th.	"	Oct. 20th.	"	Nov. 26th.

We could extend this list, but one failure is as good as 100; it proves the powerlessness of the remedy. But why is the week's delay accountable? If the inoculations rested on a true scientific basis, they should be powerful at any time before the development of hydrophobia. Let that pass, and let us examine another paragraph:—

"It is worthy of notice that *nearly* every European country now has an anti-rabic institute except our own."

This is very surprising news. Is not Germany in Europe? Has it a Pasteur institute? Has Belgium? Are not both these countries in the foremost ranks of medicine? We are sure Mr. Hart has either not seen these two paragraphs, or he has trusted this section to a too enthusiastic partisan of the method, to whom "facts" are of little value in comparison with bolstering up the system Pasteur.

SANITARY UNDERCLOTHING.

MEDICAL men are agreed on the advantage of wearing pure woollen underclothing, this form of apparel being particularly recommended for children, and for all ages. English manufacturers in the North of England have for years been making various articles of apparel of pure wool, and in economical households thrifty housewives have worked for their children underclothing of pure white wool. In Yorkshire we know that this has been the case. From motives of economy, or for other reasons, what are termed mixture yarns are frequently used, and where these mixture yarns are made entirely from white and natural grey wool, no harm can ensue; but dyed wools are often substituted, even dyed grey, to look natural. These dyes are frequently

made of cheap material, and cannot but be regarded as highly injurious. Many other methods of cheapening the manufacture of under garments have been adopted, as in these days competition is keen, and profits low, but the best manufacturers turn out pure articles still. For the reasons given above we strongly recommend the use of garments made from the white wool *only*, in place of the so-called mixture, or *natural grey* wool. It is a fallacy to suppose there is any virtue in wool or manufactured articles imported from abroad. In the present state of English commerce it is the duty of medical men to encourage home produce, always provided that as good an article can be obtained at the same price.

HEALTH SAVING.

IN our last issue we published a notable letter from the pen of a working man who has evidently been thinking. In it he describes very forcibly—what, indeed, is too well known already—the way in which the selfishness, ignorance, and cupidity of some employers lead to operatives having to pursue their work under conditions most injurious to health. Now we wish to place before working men the only way in which they can remedy this state of things, for in their own hands the remedy lies. The artisans and working men of England far out-number all the other parliamentary electors, and it only requires that they should unite in order to sweep from the land every oppression under which they labour. But in order to do this they must fulfil certain conditions. First, they must learn to practice self-denial. It may seem strange for the comparatively well-to-do to preach self-denial to men whose whole life seems to be one long mortification. But it is not so. Working men are very often employer-denied, and society-denied; they are often stinted of their rights, but few of them indeed are self-denied. They have not learnt to hold by the Right against their worser self. They spend what in the aggregate amounts to an enormous sum annually on low and debasing pleasures. If a man is to enter on a kingdom of any kind, the fundamental law of the succession is that he must deny himself. Secondly, working men must educate themselves. The writer of that article is educated in a very true sense, although he did not get his education in the schools, nor, we suspect, in Mechanics Institutes either. Wherever such men exist they should unite and seek to educate others. At present working men are largely ignorant of what will most promote their own interests. Let them work out this problem for themselves. The editor of the *Century* magazine states that the curse of American politics is that the wire-pullers devote all their energies to secure the votes of the worst classes of society, the saloon-keepers and their clients, and therefore select their candidates for this purpose, sure that if they can get a man that will please the rabble, the decent people will vote for him to support their party. This condition of things exists in England too, and what politics need at present is a strong phalanx of the working classes who will stand for the practice of righteousness.

THE LEICESTER DISPENSARY.

THE *Leicester Journal*, January 15th, publishes a long account of a meeting held to suppress and correct abuses in connection with the Provident Dispensary in that town. We give a portion of the indictment, and ask, can such things be? The Rev. A. A. Isaacs said:—"Many of them knew what methylated spirits meant. It was a noxious preparation, and was made noxious because it was admitted free of duty in order to meet the wants of trade, and was sold at 2s. 6d. a gallon. It was utterly unfit to be taken inwardly; but what would they think when he told them that that preparation had been used in the preparation of tinctures at the Dispensary? That was a matter affecting the health of the community. It was communicated to the officials at Somerset House, and one of them was sent down to investigate it; and he (Mr. Isaacs) had evidence that, whilst that official was engaged in controversy, someone on the premises was turning down the sink the tinctures and the preparations which had been made up in the manner he indicated. Mr. Isaacs went on to state that quassia, in a decomposed state, had been sent to the branch dispensaries, and used there, and that he had been told that the rate of payment for the drugs at the Dispensary was the same for 100 bottles as it was for one bottle." The Dispensary is evidently in need of reform. The manager appears, from the report, to have absolute control, and to order matters just as he pleases. The press of Leicester has done its duty well in publishing this full report, and we hope that it will not allow the matter to drop.

THE DANGERS OF OCCUPYING NEWLY-BUILT HOUSES.

ACCORDING to *Medical News*, the town of Basle, Switzerland, has adopted a regulation which prevents newly-built houses from being inhabited until four months after their completion. According to Pettenkofer's estimate, the walls of a building in which 100,000 bricks are used, will require almost 10,000 gallons of water in the construction, which must be expelled before the house becomes habitated. This large quantity of water is used in the pores and spaces of the bricks and mortar until dispelled in the form of vapour. It is a matter of every-day observation that people recklessly occupy houses almost before completion, without regard to their dryness, or other conditions of fitness for occupation.

HOW NOT TO TREAT HYDROPHOBIA.

Dr. Dulles, Philadelphia, says in reference to a case of so called hydrophobia, where the patient was exposed for a quarter of an hour on a chair in full view of a number of students:—"We warn our readers that they need never expect to cure a patient supposed to have hydrophobia if they watch him closely, expose him at a public clinic, offer him water, inject morphine and chloral into him, and above all if they add the administration of curare to these measures. What share in his death is to be attributed to the treatment he received, it would be hard to say. A careful study of the literature of hydrophobia shows that

morphia, chloral, and curare, are useless, and probably dangerous, given as they usually are." Dr. Dulles is severe in his remarks, but we certainly agree with him that the exposure of a patient suffering from hydrophobia in view of a whole class is not the way to benefit a patient.

THE DURATION OF LIFE IN MODERATE DRINKERS.

ACCORDING to the *Medical and Surgical Reporter*, Philadelphia, the great insurance companies of Great Britain have pronounced the teetotalers longer lived than even those who make a moderate use of spiritous liquors. The companies have for a series of years kept separate registers of all their members, the total abstainers being classed apart from the moderate drinkers. From the records they find the records in respect to longevity decidedly in favour of the teetotaler. One of the largest and oldest of these companies, which has kept separate registers for twenty years, declares that among the strictly abstaining class the real mortality has fallen short by thirty-six per cent. of the ordinary expectancy, while fully nine-nine per cent. of the moderate drinkers have attained this expectancy. Mr. Caine, M.P., concludes from a study of statistics, that the total abstainers have an average duration of life exceeding by six years that of moderate users of even the lighter alcoholic beverages, such as wine and beer. We commend to our readers the paper by Dr. George Harley on "Nipping," published in our January number.

New Materia Medica.

Geranium maculatum.—Although this is not, strictly speaking, a new remedy, yet it is new in the same sense as *Convallaria majalis*. It is an old remedy which was used more than sixty years ago in the United States by Dr. Barton, who considered it entitled to the attention of every American physician. Dr. J. V. Shoemaker, Professor of Dermatology in the Medico-Chirurgical College of Philadelphia, now directs the attention of the medical profession to the value of the drug (*The Medical Bulletin*, p. 362) as an astringent in many cases where ordinary remedies fail to be of service. The rhizome of this plant is the part used in medicine.

Geranium maculatum is a perennial herb, common in rich woods in Canada and the United States, and flowering from April to July. It has hairy leaves, which when old become blotched with white (hence its specific name). The flowers are of a light purple colour. The rhizome is collected for medical use in late summer or autumn. It is two to three inches long, and a quarter to half an inch in diameter, tuberculated and longitudinally wrinkled. Externally, it is of a dark brown colour, and internally pale red-brown. There is a circle of small, yellowish, wedge-shaped, woody bundles near the root-bark, the bundles being separated by broad medullary rays. The taste is strongly astringent, but the rhizome is without any distinctive odour. It contains mucilage and starch, and about 13 to 17 per cent. of tannin, gallic acid, and various resins and oleoresins, which have not yet been studied. The latter are considered by Dr. Shoemaker to enhance the usefulness of the drug, and to render it more potent than either tannic or gallic acid alone. In all forms of hæmorrhage, whether internal or external, it is, he states, without a superior. In doses of one drachm of the fluid extract hæmoptysis can be promptly arrested, if a dose is given hourly, and relapses prevented by continuing the medicine at intervals for three or four days. Hæmatemesis may be effectually controlled after ergot, sulphuric acid, iron, ice, and other styptics have failed. In hæmorrhage

from the kidneys and intestinal canal, smaller doses of twenty drops four times daily, for an extended period, answer better. Epistaxis may be speedily checked by plugging the nostrils with cotton dipped in a solution composed of one part of the fluid extract of geranium and three parts of water, or by syringing the nose with the same solution. Bleeding from the extraction of a tooth is easily arrested by filling the socket with a piece of cotton saturated with the undiluted extract, and applying firm pressure for a few minutes. Geranium is also found to be valuable in purpura, scurvy, hæmatidrosis, and the hæmorrhagic diathesis. In diarrhœa of typhoid fever, infantile diarrhœa, and colliquative and chronic diarrhœa, it has proved very serviceable, as well as in chronic dysentery. In phthisis it seems to be of especial value, restraining the diarrhœa, preventing hæmorrhage, moderating fever and night sweats, lessening the cough, and promoting the appetite. In chronic gastric catarrh, and the various stomach disorders due to alcoholic indulgence, benefit is derived from the use of geranium. Diluted with eight parts of water, the fluid extract forms an effective gargle in relaxation of the uvula and fauces, and chronic pharyngeal catarrh, and answers equally well for post-nasal catarrh when applied with a nasal syringe. In the form of injection it can be used in chronic gonorrhœa, leucorrhœa, prostatorrhœa, every second or third day, one part of the fluid extract being diluted with ten parts of water. The pain and irritation caused by fissure of the anus is relieved immediately by touching the fissure with the undiluted extract, and a permanent cure effected by continuing the applications two or three times daily for a few days. For prolapsus ani the fluid extract should be brushed daily over the protruding mucous membrane, and a 25 per cent. solution be injected into the rectum every second day. Repeated applications of the fluid extract will also relieve the irritation of hæmorrhoids, and frequently cause the tumour to shrivel up and disappear. It also relieves the pain of fissured nipples, and forms a protective covering under which healing goes on. A 10 per cent. solution forms a useful application to granular lids, in chronic conjunctivitis and corneal ulceration. In diseases of the skin in which secretion is excessive, such as hyperidrosis and bromidrosis, bathing the parts affected with a 30 per cent. solution of the fluid extract proves effective in lessening perspiration and removing fœtor. Dr. Shoemaker recommends it in the form of a lotion in vesicular and purulent eczema, impetigo, pemphigus, intertrigo, and in eczema and herpes of the genital organs. It is also efficacious in preventing the formation of bed-sores, and promoting the healing of indolent ulcers. It forms an excellent application to cuts and bleeding wounds, for which purpose a small piece of cotton-wool, soaked in the fluid extract, is applied with pressure. In fact, Dr. Shoemaker considers it the best vegetable styptic in the materia medica.

New Remedies.

Pilocarpine appears to have received some attention as a remedy in yellow fever. Dr. E. Hebersmith, in the *Med. Bulletin* (p. 337) reports in detail several cases in which the subcutaneous injection of one quarter of a grain of the hydrochlorate effected the cure of the disease. He is so satisfied of its value that he remarks that if pilocarpine is as effectual in the hands of others as it has been in his, "yellow fever has become a trifling matter."

Ephedrine, the mydriatic alkaloid mentioned last month (p. 32), is reported by Professor Nagen, of Tokio to be useful in cases where atropine is contra-indicated. The strength used is a 10 per cent. solution. He speaks of the hydrochlorate as occurring in acicular crystals, of its being freely soluble in water, and of the solution being unaffected by light. It seems rather remarkable that the occurrence of a mydriatic property has not been noticed before in this genus. If the discovery be confirmed by independent experiments, it lends some probability to the theory that the soma plant of the ancients was a species of ephedra.

Strophanthin has formed the subject of further research by Messrs. Adrian and Bardet. These chemists find that it is a glucoside which breaks up into glucose, and an alkaloid that is probably the strophanthidine of other authors. They are disposed to think, however, that the alkaloid present in the liquid obtained by macerating crushed strophanthus seed in water is not strophanthidine, but that it is probably either related to or identical with the ineine of M. Hardy.

Iodine trichloride is now brought forward as a disinfectant and germicide. It is prepared most conveniently by passing a full current of chlorine into a three-necked flask, into which iodine is vapourised from a small retort fitted to the central neck. The trichloride forms orange-yellow crystals, which are darker if contaminated with the liquid monochloride. This compound is rather freely soluble in water, forming a strongly acid, yellow liquid, with a somewhat penetrating pungent odour. Although soluble also in ether and alcohol, the alcoholic solution undergoes change, even in the cold, chloral being formed. Strong aqueous solutions keep better than dilute preparations, the latter undergoing decomposition, especially when subjected to direct light, hydrochloric and iodic acids being formed, as well as monochloride of iodine. Professor von Langenbuch reports that its germicidal action far exceeds that of carbolic acid, and comes nearer to that of corrosive sublimate, over which it possesses the advantage of being relatively non-poisonous. He considers an aqueous solution of the trichloride of iodine of the strength of 1 in 1,000, or 1 in 1,500, as equal to a 4 per cent. carbolic acid solution, or a 1 in 1,000 or 2,000 sublimate solution, for the disinfection of wounds, the hands, or instruments. A solution of 1 in 1,200 is recommended as an injection for gonorrhœa, or taken internally in the dose of a teaspoonful every two hours as a remedy for dyspepsia, dependent on the presence of bacteria in the stomach or intestines.

Sozoiodol is the name given to another iodine compound which has recently been introduced in the treatment of certain skin diseases by Dr. Lassar. It is stated to be an acid sodium salt of iod-paraphenol-sulphuric acid. It occurs in the form of a white, shining, crystalline powder, which does not melt on being heated to 200° C. It is quite odourless, has a faintly acid taste, and is soluble in water to the extent of 7 per cent., but is more soluble in hot water. It is also more soluble in hot alcohol than in cold.

Guaiacol has been suggested for use in phthisis instead of commercial creasote, on the ground that the former is a more definite body. Ordinary beech-tar creasote contains about 60 to 90 per cent. of guaiacol. When pure, it forms a clear refractive liquid, of an agreeable aromatic odour, boiling at 200° C., and having a sp. gr. of 1.1171 at 13° C. It dissolves in caustic alkalies, and gives with ferric chloride an emerald green colour. It darkens readily when exposed to light, and should therefore be kept in the dark.

Sodium fluosilicate, lately introduced as an antiseptic, is recommended in the *British Medical Journal* (p. 1376) by Mr. T. E. Hayward, as an equally effective and safe substitute for corrosive sublimate in midwifery practice. It is only slightly soluble in water, a pint of water dissolving about fifty grains. A saturated solution should be used. It is easily carried in the form of fifty grain powders.

A new use of glycerine is pointed out by Dr. J. Althaus. A teaspoonful or half a teaspoonful injected into the rectum by means of an ordinary glass syringe causes a speedy evacuation without pain or irritation. Dr. Althaus has found this simple remedial means to act well in cases of habitual constipation. He explains its action as follows:—Glycerine, when brought into contact with mucous membrane of the rectum, withdraws water from it, causing hyperæmia and irritation of the sentient nerves of the rectum, which lead by reflex action to powerful peristaltic contractions, ending in defæcation. He remarks that there is no pain, the action take place *cito, tute et jucunde*.

Cocaine is said by Mr. W. Edmunds to be less liable to produce unpleasant symptoms if a 5 per cent. solution only be used for hypodermic injection (*Lancet*, p. 14).

Periscope.

I.—GLEANINGS IN MEDICINE.

By W. B. KESTEVEN, M.D.

On the Changes in the Blood during Pregnancy. By P. J. Meyer, Bern (*Centralblatt für Gynäkologie*, No. 47, 19th Nov., 1887).—The examination of the blood taken from ten healthy unimpregnated females, and from thirty-seven women in the last months of gestation, determines the diminution in the number of red blood globules from the early days to the end of gestation. In the puerperal condition the red globules and homoglobin increases, so that within a fortnight the number of red globules relatively exceeds that of pregnancy.

On the Absence of Microbes from Expired Air (*L'Union Médicale*, 10th Decembre, 1887).—MM. J. Strauss and W. Dubresnil have submitted observations upon the above subject to the Academy of Sciences, Paris. They observed that the air introduced into the pleural cavity as the result of fracture of the ribs, without external wound, produces infinitely less serious consequences than those which follow on pneumothorax from a penetrating wound of the lung. This, which had been to the authors a mystery, is explained by the germ theory, which shows that it is one of the functions of the bronchi to act as a filter to exhaled particles and prevent their entry to the air-cells. This explanation, the authors remark, is confirmed by the observation of Tyndal, who states that expired air is optically pure. This statement MM. Strauss and Dubresnil have endeavoured to verify by bacteriological methods of examination, and have substantiated Tyndal's conclusions, from which it is demonstrated that men or animals, confined in a small space, so far from polluting the atmosphere, on the contrary, *so far as microbes are concerned*, purify it. The effects of respiration on the inspired gases are not hereby alluded to.

The Employment of Pilocarpine in Pulmonary Disease. By Dr. Riess (*L'Union Médicale*, Nov. 24th, 1887, from *Berliner Klin Wochenschrift*).—Dr. Riess has found that in dropsy connected with pulmonary disease—the cough and dyspnoea—these symptoms have rapidly declined from subcutaneous injection of pilocarpine, secretion and expectoration having become abundant. On account of the expectorant action of pilocarpine Dr. Riess has used it in a series of cases of chronic bronchitis, in which other remedies had failed. An injection of 0.02 m. (= about $\frac{1}{2}$ gr. Eng.), or 0.01 in cases of extreme debility, given every alternate day. As a rule the effect lasts for forty-eight hours. In general twelve to fifteen injections, in from three to six weeks, effect complete amelioration in cases of asthma with emphysema. The pilocarpine has also been used with advantage by the author in chronic pneumonia; in whooping cough also, the dose being diminished according to the patient's age.

Treatment of Warts. By Bingley G. Pullin, M.R.C.S., Sidmouth (*Bristol Medico-Chirurgical Journal*, December, 1887).—Mr. Pullin has met with unexpected success in the treatment of warts on the hands of children by liquor arsenicalis, from one to three minims twice a day. In most cases the warts had disappeared in about ten days.

The Therapeutic Properties of Bromide of Iron (*L'Union Médicale*, 20th Novembre, 1887).—The bromide of iron, Dr. Hequet writes, possesses in the highest degree all the renovating properties of ferruginous medicines, and exercises, besides, a powerful sedative action upon the nervous system, diminishing, like other bromides, the after-sensibility. Hence it becomes a valuable remedy in various forms of anæmia, as it calms without depressing, and invigorates without excitement. From the year 1869 to 1887 Dr. Hequet has prescribed the bromide of iron in chlorosis, chloro-anæmia, leucorrhœa, amenorrhœa, and hysteria, with favourable results. In conjunction with Dr. Vacossin the author had observed beneficial results from the use of this medicine in diseases of the heart, in phthisis, diabetes, and epilepsy. Its beneficial influence over spermatorrhœa is also affirmed by the author.

On the Identity of the Œdema of Newborn Children with Phlegmasia Dolens. By Prof. Leon Dumas, of Montpellier (*L'Union Médicale*, 17th Nov., 1887).—Œdema of newborn children is distinct from the scleroma, or hardening of the cellular tissue, with which it has been confounded. It presents analogy from three points of view, with *Phlegmasia alba dolens*—viz., in its symptoms, etiology, and pathology. It consists in the presence of venous thrombosis, which had not previously been pointed out as belonging to the œdema of the newborn. Prof. Dumas has discovered this thrombosis in two veins of an infant in which this œdema was observed. This observation had been subsequently confirmed by other cases of newborn children of cachectic habit, in whom the respiration was feeble and the venous circulation

favourable to coagulation, especially in the umbilical vein. These pathological views indicate warmth as a main point in treatment, after the establishment of free respiration.

On the Parasitic Nature of Marsh Miasm. By Dr. Maurel (*L'Union Médicale*, 19th Nov., 1887).—From his researches into the above, Dr. Maurel has submitted the following conclusions to the Congress, at Toulouse:—It is always easy to distinguish healthy from marshy soil. The fauna and flora of marshy waters differ only in point of quantity from those of drinkable waters; the species which exist in the one may be found in the other. Marsh air differs from that of healthy districts in the presence therein of bodies which must be regarded as amœbæ in the course of development. These bodies are readily destroyed by desiccation, which is resisted the more that they are the less advanced in development; in the perfect state they resist incomplete desiccation. These researches, pursued through six years in France, in the Antilles, and in the extreme east, have shown that the same organisms that exist in the air of marshy regions have been found in the blood of persons suffering under marsh diseases. Dr. Maurel proposes to follow up his researches.

On the Etiological Bearing of the Bacilli of Tetanus (*Centralblatt für Chirurgie*, 10th December, 1887).—In the cases of two deaths from tetanus the communicability of the disease by bacilli was tested by their inoculation into mice, followed by tetanus and death (Beumer, *Berliner Klin. Wochenschrift*).

Observations on some of the New Hypnotics. By P. W. MacDonald, M.D. (*Bristol Medico-Chirurgical Journal*, December, 1887).—*Hyoeyamine*.—Dr. MacDonald is of opinion that the efficacy of this hypnotic should become generally known. "I prefer," he states, "and always use the extract. The most reliable preparation of the liquid extract is that known as Mercks's—expensive, but when made into a concentrated solution is easily dispensed, and will retain its strength for a long time. A convenient solution is one in 64. The dose of the extract is $\frac{1}{32}$ to $\frac{1}{2}$ gr., but you will seldom have to give more than $\frac{1}{4}$ gr." In recurrent cerebral excitement this is a useful remedy. When given continuously it is apt to accumulate and cause distressing dryness of the mouth and throat. It is most useful in robust subjects of maniacal excitement; its use is to be avoided in the weak or debilitated. Small repeated doses are better than one large dose.

Paraldehyde stands in same rank as chloral, but acts more speedily and gives a more natural sleep. Its action is gradual, and if it does not produce sleep it does not excite. It is a much more valuable hypnotic than many now in use. It may be employed in almost all instances of disturbed sleep, except when from mental excitement or severe pain. The dose is 3i. to 3ij., given in mucilage or syrup. In the selection of a hypnotic, the true cause of the patient's loss of sleep should be ascertained; we should note whether the case is one of simple restlessness or genuine wakefulness.

II.—NOTES FROM FRANCE.

By HASTINGS BURROUGHS, L.R.C.S.I., ETC.

At the Académie de Médecine M. Rochard read a paper on ligation of the internal iliac artery for pulsating tumour, situated in the gluteal region. The patient was a young man, who for several years had a tumour in the right buttock, in which distinct pulsation was observed. Compression of the external iliac artery was tried, but no change took place in the size or character of the tumour. The diagnosis was difficult, as several ideas presented themselves. Was it a sarcoma, an angioma, or an aneurism of the gluteal artery? The surgeon decided on seeing what would be the result of tying the internal iliac, for some kind of speculation became imperative, as the tumour was about to give way. Immediately that the artery was tied, all pulsation disappeared, and the tumour diminished greatly in volume, and the patient was much relieved. From day to day all went on well, but the man insisting on returning to his work too soon, the swelling returned, suppuration became abundant, and fifty-seven days after the operation death took place. The autopsy showed that the artery was entirely obliterated, and the fossa was filled with pus and clots. This operation was the thirteenth of its kind practised by surgeons for aneurism of the ischiatic or gluteal arteries, of which six were successful.

M. Richelot spoke on a case of persistence of the canal of Nück. A young girl, aged nineteen, came to the hospital with a small tumour in the right inguinal region, which during the last four years showed itself prominently at the summit of the right labia when in the perpendicular position; it disappeared when the horizontal position was assumed. An inguinal hernia was diagnosed, and the patient desiring an operation, as she said that her marriage had just been broken off by reason of it, her request was granted. M. Richelot at first reduced the tumour, and

having excised the integuments, a fibrous cord—resembling more a narrow sac than the round ligament—was brought to view, and immediately the operator entertained the idea of a congenital hernia, which subsequent dissection confirmed. The communication between the canal and the peritoneal cavity was much too narrow to admit the passage of the intestine or omentum, and no other tumour than that of hydrocele could be found in such a situation. The girl left the hospital ten days afterwards entirely healed. The author, in conclusion, insisted on the fact that many surgeons denied, that the canal of Nüeck could be pervious, and here was a case in point, the operator thinking that the case was one of congenital hernia, but he was not sorry to have been disappointed, as the result was very satisfactory. Referring again to the radical cure of congenital hernia, M. Richelot said that he considered the operation so benign that it should never be refused. He and his colleagues have operated 140 times successfully.

At the Société de Chirurgie, M. Terillon spoke on the use of sponges steeped in boiled water for antiseptic dressing. He considered that carbolic acid baths were powerless in the cleansing of instruments. He prefers putting them into boiling water on the spot, as water in ebullition could not contain any microbe hurtful to man. Such was the opinion of M. Pasteur. M. Terrier said that although boiling water might not contain any microbes, it might contain spores; and consequently, he would advise that the water should be boiled several times in order to destroy those germs. M. Terillon replied that if the water were employed immediately, the spores would not have time to germinate.

M. Terrier read a paper on electric sunstroke. At the great steel works of the Creusot, the workmen who were soldering steel by means of electricity were attacked with symptoms analogous to those seen in sunstroke. The face and neck became inflamed and painful, and the skin peeled off as in the first degree of burn; the eyes became congested, and photophobia was well marked, in spite of the well-smoked glasses which the men wore. M. Terrier said that he assisted once at a similar operation, to test the intensity of the light. He guarded his eyes with yellow and red glasses, and standing two yards away, he laid bare his arm for a few minutes. At first he felt nothing, but in about half an hour an itching was felt in the arm, followed by intense redness. He slept uneasily that night, and in four days desquamation took place, as from an ordinary sun-burn. What was the cause of all these symptoms? Colorific radiation could not be admitted, as it is well known that electricity emits but little heat. He thought the matter was very difficult to explain.

Professor Dieulafoy gave a lecture in the Faculté de Médecine on diagnosis of cancer of the stomach, which is well worth reproducing. He first mentioned what were considered as the classic symptoms of the disease—a dyspeptic condition of more or less duration, in which anorexia predominated; pain, sometimes of a very sharp description; vomiting of food; hæmatemesis of the coffee grounds type; and a tumour, easily diagnosed if situated at the pylorus or on the front of the organ, but difficult to find if situated at the cardiac end. The general symptoms are emaciation and decolouration of the skin. But it must be borne in mind that all these, or at least, some of the most important, may be met with in chronic gastritis, dilatation of the stomach, simple ulcer, or even in lesions which are situated far away from the organ. An error in the diagnosis in some of these cases would be followed by an error in the treatment which might be fatal to the patient. Trousseau relates two cases of chronic gastritis, which resembled almost in every point cancer of the stomach. One of them, a man of fifty, vomited all his food. He lost in three months forty pounds in weight, and ejected daily a lot of mucous liquid of a black colour, resembling soot, and such as is witnessed in certain forms of cancer of the stomach. The affection made rapid strides towards a fatal termination, and the autopsy showed no trace of cancer. It is thus seen how easily a wrong diagnosis may be formed. However, there is this in favour of chirurgic gastritis—the vomiting of glairy liquid, especially in the case of drunkards, occurs generally in the morning, and the patient does not wear that emaciated aspect as seen in cancer. Dilatation of the stomach might give rise to symptoms resembling malignant disease; but here the dyspeptic troubles greatly predominate. Flatulence, pain after taking food, and vomiting of certain kinds of ailments, are the chief features. Washing out of the stomach generally gives a relief not witnessed in cancer. Ulcer of the stomach has often induced an error in diagnosis, as well as cancer of the omentum and the pancreas. Are there any signs on which absolute reliance can be placed? Trousseau gives one—*phlegmasia alba dolens*. It was exactly that symptom which made him believe he had cancer of the stomach, and as is well known, he died of it a few months afterwards. However, phlegmasia is not an infallible sign, although of very great importance, as it has been often witnessed in other affections. Rounnelere thought that a decrease in the urea was a sure symptom, but a similar condition can be found in leucocythemia, hydatids of the liver, etc. According to Professor Dieulafoy, the only sign on which

absolute reliance can be placed is the presence of *chlorohydric acid in chyme*. A few drops of a concentrated solution of brilliant green—*vert brilliant* (?)—placed in a test tube containing distilled water, gives a blue tint. If the distilled water were replaced by fresh gastric juice, the colour produced will be slightly green; and if the muriatic acid be in excess, the colour will be green; but if, on the contrary, this acid be absent, the effect will be the same as in the case of distilled water. Now, in cancer of the stomach, chlorohydric acid is always greatly diminished, and often wanting altogether, according to Dr. Debove. Consequently, the continued absence of this acid in the gastric juice is a certain sign of cancer of the stomach.

III.—NOTES FROM RUSSIAN JOURNALS.

BY VALERIUS IDELSON, M.D., BERNE.

On the Influence of Acute Febrile Diseases on Syphilis.—In the *Voëno-Sanitarnoe Dëlo*, No. 47, 1887, p. 557, Dr. D. N. Jankovsky publishes a new illustration of this rather curious clinical fact, that an inter-current febrile disease may cure—at least, apparently—syphilis. A “splendidly-built and nourished” student, aged twenty-two, contracted syphilis early in October, 1886. On examining the patient in December, the writer found an indurated copper-red flat scar at the site of primary (preputial) ulcer; painless swelling and induration of the inguinal, cubital, and occipital lymphatic glands; rosy and copper-red circular or irregular spots, varying in size from a lentil to a pea, and studding the whole chest and abdomen, as well as the inner aspect of the thighs; and angina, with an intense copper-red discolouration of the faucial mucous membrane. On the fifth day after the appearance of the rash there supervened rigor, followed by high fever, general malaise, agonising pain in the right side of the chest, and, later on, by cough, with expectoration of a viscid rusty sputum and intense dyspnoea—in short, there developed croupous pneumonia. The treatment of the latter was limited to nursing. On the seventh day of the pulmonary inflammation the temperature suddenly fell from 40° to 36.7° C., the patient bathing in his perspiration for the next three days. During the febrile stage of pneumonia, no alterations in syphilitic symptoms could be observed on carefully examining the patient every day; but on the second day after the crisis, the rash began to markedly fade. Two days later only its traces, in the shape of a slight greyish pigmentation, could be detected. In a week the patient's skin became quite clean, the preputial scar softened, and the faucial mucous membrane assumed a normal appearance. When seen in August, 1887, the patient did not present any traces of syphilis, and was in excellent health, which he had been enjoying ever since his recovery from pneumonia. Not a particle of mercury or iodine has been used in the case.

[That syphilitic symptoms may undergo an alteration under the influence of supervening acute fevers—such as croupous pneumonia, erysipelas, typhoid and typhus fevers—is admitted without any dispute by all dermatologists and syphilographers. It is otherwise, however, as regards the question as to whether acute fevers can cure syphilis, or not. The German school in general (F. A. Simon, Zeissl, Baeumler, J. Neumann, Hebra, sen., Kaposi, Gruenfeld, etc.) seems to admit only the possibility of a temporary alleviation or disappearance of syphilitic phenomena. Meanwhile, the international literature contains a series of observations which, like Jankovsky's case, apparently prove that syphilis can be actually cured by an inter-current febrile disease. Similar cases are mentioned by Giraudeau de St. Gervais (1825 and 1838). In 1860 Professor Eltzinsky, of Moscow, having carried out a series of clinical experiments on the treatment of syphilis by vaccination, arrived at the conclusion that the development of a reactive fever in his vaccinated syphilitic patients represented an essential condition for obtaining a successful result (that is, a complete cure) from his method. Having repeated Eltzinsky's experiments, Dr. Eiland laid down (*Voëno-Meditzinsky Jïrnal*, July, 1860) the proposition that “when syphilis was cured by vaccination, recovery ensued solely under the influence of a febrile state caused by the introduction of vaccine lymph into the syphilitic patient's system.”]

According to Dr. J. Petrovsky (*Vratch*, No. 22, 1881, p. 360), cases of syphilis cured by acute fevers were published in Russian journals, also, by Drs. Lavrentieff, Behrenson, and Spiro. Dr. Petrovsky himself came across three cases of the kind. In one of his patients, a strong man, aged thirty, admitted with syphilitic symptoms of about six months' duration, there were present diffuse induration of the whole foreskin, a shallow indurated ulcer on the lower aspect of the prepuce, acute phimosus, balanitis, flat warts on the glans, numerous moist papulæ over the scrotum, extensive mucous patches in the fauces, papulous syphilides with a slight desquamation over the scalp, and cutaneous tubercles, as big as a pea, over the face. A six weeks' course of mercury failed to effect any improvement, beyond some trifling softening of the preputial induration, and a slight diminishing and

drying of the scrotal syphilides. About the end of two months since his admission, the man somehow managed to contract an extremely severe confluent small-pox, accompanied by a high fever with cerebral symptoms. On his recovery from the attack, not a trace of syphilis, or any sign of syphilis, could be detected. Another patient, a strong soldier, aged twenty-seven, was first admitted with cutaneous and mucous syphilides, faucial ulcers, and induration and swelling of numerous cervical glands. After a course of mercury, he was discharged seemingly cured, the only trace left being a hard nodule, of the size of a largish pea, situated beneath the right angle of his lower jaw. A year elapsed, during which period the man occasionally suffered from night-pains in his legs. By the end of the said time he again came under Petrovsky's care, and that on account of a severe attack of typhoid fever. On his admission, the author found that the former hard and deeply-seated sub-maxillary nodule had transformed into a superficial, adherent, soft, flabby, roundish tumour, of the size of a big walnut—that is, into a gumma of subcutaneous cellular tissue. About the period of his re-convalescence from typhoid, the tumour spontaneously gave way to discharge a brown, viscid, semi-fluid matter. The cavity soon healed, the man leaving the hospital only with a slight brownish discolouration, and a small soft scar at the spot. No remedies were used, except anti-pyretics. The author's third patient, a well-made and nourished soldier, aged twenty-three, was admitted on account of facial erysipelas with a high fever. On examination, there were found also superficial ulcers on the penis, tumefaction of the inguinal and cervical glands, sore throat, and flat condylomata on the soft palate and oral mucous membrane. In a fortnight, not only erysipelas, but also all syphilitic phenomena disappeared tracelessly. No anti-syphilitic remedies were used in the case. No relapse occurred in any of the men, everyone of whom remained under the writer's observation for several subsequent years.

Dr. F. E. Cudzinowicz, of Kütaïs, also saw (*Proceedings of the Caucasian Medical Society*, No. 6, 1884, p. 134) a case of a curative action of erysipelas on syphilis. His patient, an emaciated and exhausted Imeretin horseman, aged twenty-five, was admitted on the fifth day of bullous erysipelas of his left thigh. There were found also enlargement and induration of inguinal and cervical glands; a cinnamon-brown, marble-like discolouration and star-like scars over the skin of his loins, buttocks, and chest; intense periostitis of both of the tibia, with severe spontaneous pain and extreme tenderness; and a fairly deep enormous ulcer, occupying the front and sides of the right leg (more than one-third of its whole surface), with a dirty-greyish bottom, sharply-cut edges, and a thin purulent discharge. According to the patient's statements, about two and a half years previously he had contracted syphilis, from which he had been subsequently treated for more than a year. The crural ulcer had made its appearance about four months before his admission, to steadily increase ever since. Erysipelas of the thigh remained localised, to completely disappear on its eleventh day, the temperature never rising above 38.5° C. By the end of twelve days since his admission, the crural ulcer was found to be not larger than a shilling-piece, of a rosy colour, and filled up with healthy granulations; a "disgusting" mottled appearance of the integuments strikingly decreased, "as if from resorption of the pigment," and tibial pain ceased. A month later only a scar was present at the site of the crural ulcer (which, as the author thinks, had had an ecthymatous origin); lymphatic glands became softer and smaller; while not a trace of tibial periostitis could be detected, the inflammatory exudations having undergone a complete absorption. The man left the hospital in a considerably improved general state. Dr. Cudzinowicz adds that he happened to meet frequently cases of syphilis combined with malarial fevers. The influence of the latter on the former is said to be far from presenting any uniformity. As far as a freshly-contracted intermittent fever with a regular and rapid course is concerned, it may give rise to a considerable and durable improvement, or even to a complete disappearance, of various localized or circumscribed manifestations of late syphilis (such as gummatous ulcers, myositis, periostitis, etc.). Early syphilides may also rapidly dwindle away, but only temporarily, to reappear after the patient's recovery from the fever. As to malarial cachexy, and irregular types of intermittent with a torpid course, they invariably produce an extremely unfavourable influence on symptoms and run of syphilis of any form.

In the *Meditzinsky Vestnik*, No. 7, 1884, Dr. N. Schmitz describes the case of a syphilitic man with intractable callous tubercular ulcers, who, "for the sake of experiment," was placed side by side with an erysipelatous fellow-patient. On the next day—so the author says—erysipelas appeared in the neighbourhood of an ulcer to wander on, subsequently, over the whole body and limbs, from one callous ulcer to another, for seven days. From the very beginning, unmistakable signs of a "revival" of a formerly "dead" granulation tissue were said to be noted. In another week all the ulcers were full of benign granula-

tions, to swiftly heal altogether. According to Dr. Schmitz's views, in one group of syphilitic cases the curative effects of erysipelas are analogous to those of derivative means, such as tincture of iodine, or blisters. In another group the effects in question consist in causation of a fatty degeneration of morbid products, with a subsequent resorption of thus degenerated histological elements, while in a third category of cases they are essentially based on a gangrenous disintegration of morbid new growths.

Dr. A. A. Fedotoff, of Cronstadt (*The London Medical Record*, December 15th, 1883, p. 512), recorded a case of the disappearance of syphilis from croupous pneumonia. Dr. V. Volsky, of Bendery (*ibid.*, July, 1887, p. 308), described an instance of a fleeting suppression of all syphilitic manifestations under the influence of erysipelas. A rapid cure of syphilitic tubercles of the face by erysipelas was once observed also by Dr. Minelli (*ibid.*, November, 1884, p. 463). Professor Pick (*ibid.*, August, 1883, p. 338) published two interesting cases of a rapid resorption of gummata, caused by an inter-current attack of the same acute fever. Similar observations were reported further by Drs. Lancereaux, Baeumler, Bidenkap, etc.—*Reporter*.]

Congenital both-sided Anophthalmos.—Dr. Strzemiński (pronounced "Stsheminski," a Polish name) records (*Vratch*, No. 49, 1887, p. 950) a rare case of a congenital complete absence of both of the eyeballs, found by him in an otherwise normally-developed child, aged two weeks (its sex not stated). The eyelids were closed and, being devoid of any support behind, could be very easily depressed into the orbits. The palpebral slit was somewhat narrower comparatively with the normal conditions. On separating the eyelids, there was seen a small cavity lined with a normally-looking mucous membrane joining, without any demarcation, with the palpebral one. The lachrymal caruncles were absent, while the lachrymal glands seemed to be present, since there was noticed the secretion of a tear-like fluid. [A similar case was communicated some time ago by Dr. Kvashonkin, *vide* the *London Medical Record*, 1883, p. 245].

Violent Hæmorrhage from Hymen on First Coition.—At a recent meeting of the Kiev Obstetrical and Gynecological Society, Dr. Boriakovsky read an interesting paper (*Vratch*, No. 47, 1887, p. 917) on the case of a medical man's wife, aged seventeen, in whom, after the first coitus, an extremely violent hæmorrhage from her ruptured hymen had followed, the lady repeatedly falling into deep swoons. The hymen was found to be rather thick, its free edge being broken at several spots. At the bottom of one fairly-deep rupture there was detected a profusely-bleeding small vein. The hæmorrhage ceased after Dr. Boriakovsky had sutured the vessel, as well as another bleeding small fissure in the neighbourhood of the former laceration. Three days later, the hymenal hæmorrhage reappeared, but was less severe this time, and could be easily arrested by the patient's husband, by applying a solution of perchloride of iron. The author thinks that in his case there existed an anomalous excessive vascularisation of the membrane.

IV.—EXTRACTS FROM SPANISH AND OTHER MEDICAL JOURNALS.

TRANSLATED BY DR. G. CADOGAN MASTERMAN.

Enfermedad de los Buzos (Diver's Paralysis). By Dr. D. Rosendi Pi, Barcelona (continued from page 38).—Compressed air, which is now occasionally used as a therapeutic agent, becomes pathogenic when it is inhaled too long, and at too high pressures; but it is most interesting to observe how slight these effects are when the tension, even when high, is tolerably constant. A large number of the divers carry on their hazardous calling without any evil effects whatever when care is taken to increase, and especially to decrease, the pressure gradually. Others complain greatly of the oppressed breathing and the tendency to syncope, much, of course, depending upon individual peculiarities, and particularly on the possession of coolness and presence of mind in the face of danger. One of them was telling the author that, having become entangled in a bed of seaweed, he was struggling for more than two hours, at a considerable depth, before he got free, and the only trouble was the difficult breathing, and the somewhat profuse spitting of blood when he reached the surface. The greater mischief is done when the pressure is taken off too suddenly, as when from some accident, or the fear of it, the man is hauled rapidly to the surface, and the dress removed before the circulation has had time to re-adapt itself to the abruptly changed conditions. This has been explained by reference to the law regulating the behaviour of gases, dissolved in liquids under pressure, when that pressure is lessened or removed. It is then found that so much of the gas is given off as represents the difference of the volumes which the given liquid could hold in solution at the former and the latter pressure, supposing the temperature to be constant; but, if the temperature rise coincidently with the reduction in tension, then a further quantity of gas escapes, as Dalton determined in the case of

carbonic acid dissolved in water. Now, in the case of these coral divers, we have respiration—that is, gaseous endosmosis—carried on under greatly increased pressure, and with the surface of the body and its subjacent blood greatly lowered in temperature by the cold sea water; and we should expect that when this pressure was suddenly removed, and in the much warmer atmosphere, that a kind of effervescence would take place within the blood-vessels, with some approach to the terrible consequences which result when air is admitted into the veins. And the theory first advanced by Hoppe in 1857, and later by Rameaux and Bert, is that this evolution of gases within the capillaries, with consequent arrest of the circulation, explains the pleuro-cardiac phenomena and the cerebro-spinal mischief we see the divers so often suffer from. To this conclusion, however, there are several objections. In the first place, there is no real similarity between a gas dissolved in water, and air and carbonic acid diffused in blood. The latter gas is not simply held in solution in the serum, but chiefly in temporary combination with the alkaline carbonates and phosphates, the water of the blood taking up at the normal temperature very little, and in the former condition its tension is *nil*. Of the oxygen, again, very little is dissolved, the greater part combining with the hæmoglobin of the red cells, and is no longer affected by pressure. As regards the nitrogen, Setchenow has shown by experiments on dogs that only a very small amount is absorbed—too small, in fact, to influence the results.

Now, the researches of M. Bert himself have shown that the law of Dalton does not hold good in the case of the absorption of oxygen by the blood under pressure. It is true that more is then taken up, but the ratio lessens as the pressure increases, even up to ten atmospheres. And the process of oxidation, which leads through various intermediate stages to the formation of carbonic acid in the blood, is lessened as the pressure increases, because the initial process is checked by the presence in excess of the very carbonic acid it tends to form. It is only the nitrogen, which forming no alliance in the blood, is free to follow the law of gaseous absorption, and is, according to M. Bert, the agent which leads to this hypothetical capillary obstruction. But the solubility of this gas in water is extremely small,¹ and the experiments of Bert have been shown to be fallacious by the researches of MM. Mathieu and Urbain. The strongest objection to the theory is, however, that as all the divers are subjected, more or less, to the same conditions, they should all suffer from a cause which is common to them; and especially, that those working at great depths should experience them, and that the lungs, which have to bear the change first, should suffer primarily and most severely, which we have seen is not the case. And, again, the notable influence of the moral condition of the diver is untouched by it. In shallow water, and under slight pressure, the worst accidents have happened to men suffering from timidity or some sudden terror. It cannot be believed that a psychical cause could lead to increased gaseous tension, or the mechanical liberation of air within the capillaries.² But, on the other hand, terror can, by leading to the contraction of the superficial vessels, cause internal congestion, and this leads to the theory propounded by M. Foley in 1863. This observer records the striking pallor of the skin and mucous surfaces of the men working in the caissons of the bridge of Argenteuil, and the diminution and even extinction of the pulse. And although he only noticed slight surface extravasations and muscular tremors, from the blood suddenly filling the previously empty vessels on the return to the open air (the pressure was never greater than from one to three atmospheres), he showed how the same conditions within wider limits could lead to the gravest mischief. The author would term this condition hæmatomyelia; for it is evident from the results that there is not merely compression of the cord through the cerebro-spinal fluid, but also within its substance from engorgement of the perforating branches of the spinal arteries, and this satisfactorily explains the train of formidable symptoms so often culminating in paraplegia, and occasionally in death.

And the conditions under which the divers work all tend to promote, the author contends, first anæmia of the cord, and, on their return to the surface, a compensatory hyperæmia, which if gradual in its approach is harmless, but if sudden disastrous. They have always to work under great pressure, the (red) coral-bearing rocks never being found at a less depth than twenty fathoms (nearly three atmospheres), and generally lying much deeper; this not only affects respiration, but nearly the whole of the surface of the body is compressed as if by tight bandaging; below the waist and the wrists there is no elastic air cushion to lessen it; so the heavy and frequently very cold sea water presses with leaden weight on the abdomen and legs, and at the greatest depths the action

of the pump is often so imperfect, that it is as much as it can do to keep the helmet full without inflating at all the dress covering the back and chest. From the symptoms described in the ten illustrative cases, it is clear that the worst mischief is seated in the medulla spinalis; that in the brain would seem to be simple compression, possibly that "serous apoplexy" which so often figures in our supposititious death certificates. But it is by no means clear that this is due to sudden reduction in pressure.

It should be noticed that Dr. Pi never accompanied the divers in their work, and that he really personally treated but one case—the last—and he mentions the very inexact and confused statements he heard from the men often long after the incidents occurred. From the position of the spinal cord, its serous, bony and muscular coverings, and the sources of its blood supply it, surely forms part of the internal organs of the body, and when the blood from the skin and superficial muscles is driven inwards by the combined cold and pressure, it is then one would expect the results due to engorgement to shew themselves, not when the blood returns in normal quantity to the surface. And, it is evident from the graphic descriptions of the corpse-like faces and icily-cold bodies of those who suffered most severely, that it was when this healthy reaction did not occur that mischief ensued, which gradually increased in intensity, most probably from engorgement having been followed by extravasation of blood within the cord or its *pia mater*.

As regards treatment, the author speaks highly of that used by the divers themselves: the vigorous rubbing of four pairs of horny palms, somewhat mitigated by powdered stæatite, until the patient return to consciousness, or (he naively adds) to paralysis or death. But from the examples given the results are not encouraging, and No. 8, who refused to submit to this regimen, and simply lay down on the deck warmly covered up, seems to have fared as well or better than those who did. The more regular treatment advocated by hard purging, cupping, leaching the anus and counter irritation, would meet with little favour amongst English practitioners. But it would be very interesting to learn from our naval surgeons, who must have occasionally watched the service divers at work, if they have noticed any similar results, and especially, if these men have contributed any cases of diver's paralysis.

Two Cases of Cure of Deaf-Mutism from Otopiesis. By Dr. D. P. Verdós (*Rev. Cien. Med.*, Barcelona, December, 1887).—Within recent times treatment of the diseases of the auditory apparatus has advanced so much, that the greater number have lost their old reputation of hopeless incurability, but the many deaf-mutes seen amongst us are still a reproach to this branch of medical specialism, and the more so as it is being apparently conclusively proved that congenital cases of the defect are really so rare that it can scarcely be said that they exist: the error arising from the fact that the initial mischief is overlooked until it is too late to remedy it. To show what can be done by appropriate treatment, even in the least promising cases, the two appended will show:—

Enrique, a child of about five years of age, robust and healthy, and with no other defect than deafness and consequent inability to speak. He throve when an infant, but the parents soon noticed with dismay that he could hear none but the loudest sounds, and could not utter a syllable. A doctor was consulted who advised waiting, with the assurance that all would be well in time; and this was done until the still voiceless child had reached the above age, when Dr. Verdós was consulted as a specialist. On examination he was at first inclined to put down the case as incurable, but, by watching the boy's face as he moved a vibrating tuning fork in contact with his head, he noticed such a change in expression that it was evident the sounds were faintly heard, although the child could not utter a syllable in evidence of it. However, as it was clear that the auditory nerve was not altogether destroyed, treatment was undertaken with the understanding that it must necessarily be tedious, and possibly abortive. The tympani were found bulging excessively from purulent fluid in the vestibule, and the Eustachian tubes were completely blocked; the mischief having apparently commenced there with neglected catarrh and then extended to the middle ear. By gentle and persevering catheterism, injection of air through the gradually opened tubes, and douches of alternately compressed and rarified air in the meatus externus, the potency of the former was restored, the vestibules emptied and the tympani restored to their normal form, and with such success that at the end of two months the child could hear sounds of all kinds including the ticking of a watch, and, which was of far more importance, was beginning to understand the meaning of simple words. A little later he began to form syllables for himself, and at length to speak as well as children of his age ordinarily do.

The second case was that of a child named *Pepe* (Joey), about four years old, of lymphatic temperament, feeble constitution, and with an air of the utmost stupidity; he was absolutely deaf, and had never uttered a single word. With him the auditory faculty seemed to be

¹ Brande (*Man. Chem.*, p. 326) says nitrogen is not absorbed by water unless the whole of the air in it has been expelled by long boiling, and then only to the extent of 1.5 per cent. (*Trans.*)

² Although this seems a very reasonable explanation of the extraordinary meteorism so often seen in hysterical cases (*Trans.*)

utterly abolished, he showed no signs whatever when the tuning-fork vibrated in contact with different parts of his head. The condition of the tympani and tubes was identical with that of the preceding case, and, although any chance of success seemed exceedingly remote, the same treatment was pursued, and, most unexpectedly, with equal success. From the feeble mental condition as well as the more tender age of *Pepe*, he did not get on quite so fast as the other, nevertheless, both in hearing as in speaking he did all that could be expected of him.

Chromatic Audition (*De L'Audition Colorée*). By J. Baratoux (*Le Progrès Médical*, Paris, December 24th, 1887).—Some years ago a kind of chromatic piano was exhibited in London which emitted no sound, but showed octaves and chords of spectra and harmonies of complementary colours. The effect was said to be quite too lovely by the inventor, but an unappreciative public laughed at him, and the machine was soon forgotten. It seems, however, that in France and Germany many sensitive people exist, who habitually, by a process of unconscious cerebration, connect certain sounds and colours, like the blind man who, having gained the power of seeing, always associated "red with the sound of a trumpet;" but then, it may be observed, that as many trumpeters are clothed in scarlet the combination might have been simply visual after all. The proportion is said to be as high as 12.5 per cent. of those tested in Germany, and in some it is so pronounced that they see a halo of the conjoined colours playing around the strings of a violin or guitar when in vibration. Now it has been stated that if the middle C wire of the piano could be bi-sectioned thirty-two times, and then be made to vibrate it would emit not sound but a yellowish-green light, but these more impressionable (imaginative?) subjects perceive it when the wire is still of its ordinary length. Others, again, link certain tastes and odours with particular sounds, even as we more matter-of-fact Englishmen experience certain agreeable gustatory sensations when the second dinner bell is sounding. As the idea of colour in these cases, as well as that of taste, is purely subjective, the author of the two long articles can bring only hypothetical reasoning to bear upon it, and fairly quotes the opinions of others who look upon it as a very pleasing and harmless hallucination; and, as wit has been said to consist in finding similarities in perfectly dissimilar objects, may not it be looked upon altogether as an æsthetic *jeu d'esprit*? It explains, however, a very puzzling verse in a sonnet of Verlaine's which runs:—"A noir E blanc I rouge U vert O bleu, voyelles. . . ." And Théophile Gautier after taking haschisch says, "I heard the sounds of the colours—green, red, blue, yellow—tones in waves of harmony; and a falling glass, a creak of my arm-chair vibrated and rolled in peals of lurid thunder!"

V.—INTERNATIONAL MEDICAL CONGRESS.

SURGICAL NOTES.¹

(Continued from page 43, January, 1888).

WE gave an abstract of Dr. Parkes' paper in the November number, 1887, p. 522, and referred to the valuable paper by Dr. Nicholas Senn, of Milwaukee, Wis., entitled *An Experimental Contribution to Intestinal Surgery, with Special Reference to the Treatment of Intestinal Obstruction*.—*Artificial Intestinal Obstruction*.—*Stenosis*. (a) *Partial Enterectomy and Longitudinal Suturing of Wound*.—Traumatic stenosis from this cause becomes a source of danger from obstruction or perforation in those cases where the lumen of the bowel is reduced more than one-half in size. Longitudinal suturing of wound on the mesenteric side of the intestine should never be practised, as such a procedure is invariably followed by gangrene and perforation by intercepting the vaso-motor supply to the portion of bowel which corresponds with the mesenteric defect.

(b) *Circular Constriction of Intestine*.—The immediate cause of gangrene in circular constriction of a part of intestine is due to obstruction of the venous circulation, and takes place first at a point most remote from the cause of the obstruction.

2. *Flexion*.—(a) *Flexion Produced by Partial Enterectomy and Transverse Suturing of Wound*.—On the free surface of the bowel a defect an inch in width can be closed by transverse suturing without causing obstruction by flexion. In such cases the stenosis is subsequently corrected by a compensating bulging, or dilation of the mesenteric side of the bowel. Closing a wound of such dimensions on the mesenteric side of the bowel by transverse suturing may give rise to intestinal obstruction by flexion, and to gangrene and perforation by impairing the arterial supply to, and venous supply from, the portion of bowel corresponding with the enteric defect.

(b) *Flexion caused by Inflammatory and other External causes* gives rise to intestinal obstruction only in case the functional capacity of the flexed portion of the bowel has been diminished or suspended by the

causes which have produced the flexion, or by subsequent causes independently of the flexion.

3. *Volvulus*.—As in flexion a volvulus gives rise to symptoms of obstruction when the causes which have given rise to a rotation upon its axis of a loop of bowel have at the same time produced an impairment or suspension of peristalsis in the portion of bowel which constitutes the volvulus, or when a diminution or suspension of peristalsis follows in consequence of the rotation.

4. *Invagination*.—Accumulation of intestinal contents above the seat of invagination is one of the most important factors which prevents spontaneous disinvagination and which determines gangrene of the intussusciens. Spontaneous reduction is not more frequent in ascending than descending invagination. The immediate cause of gangrene of the intussusciens is obstruction to the return of venous blood by constriction at the neck of the intussusciens. Ileocaecal invagination, when recent, can frequently be reduced by distension of the colon and rectum with water, but this method of reduction must be practised with great care and gentleness, as over-distension of the colon and rectum is productive of multiple longitudinal lacerations of the peritoneal coat, an accident which is followed by the gravest consequences. The competency of the ileo-caecal valve can only be overcome by over-distension of the caecum, and is effected by a mechanical separation of the margins of the valve; consequently it is imprudent to attempt treatment of intestinal obstruction beyond the ileo-caecal valve by injections per rectum.

Enterectomy.—Resection of more than six feet of the small intestine in dogs is uniformly fatal. The cause of death in such cases is always attributable to the immediate effects of the trauma. Resection of more than six feet of the small intestine in dogs is incompatible with normal digestion, absorption, and nutrition, and often results in death from marasmus. In cases of extensive intestinal resection the remaining portion of the intestinal tract undergoes compensatory hypertrophy, which, microscopically, is shown by thickening of the intestinal coats and increased vascularisation.

Physiological Exclusion.—Physiological exclusion of an extensive portion of the intestinal tract does not impair digestion, absorption, and nutrition as seriously as the removal of a similar portion of resection. Faecal accumulation does not take place in the excluded portion of the intestinal canal. The excluded portion of the bowel undergoes progressive atrophy.

Circular Enterorrhaphy.—A modification of Jobert's invagination-suture by lining the intussusceptum with a thin, flexible, rubber ring, and the substitution of catgut for silk sutures is preferable to Czerny-Lembert sutures. The line of suturing on neck of intussusciens should be covered by flap or graft of omentum in all cases of circular resection, as this procedure furnishes an additional protection against perforation. In circular enterorrhaphy, continuity of the peritoneal surface should be secured when the mesentery is detached by uniting the peritoneum with a fine catgut suture before the bowel is united, as this modification of the ordinary method furnishes better security against perforation on the mesenteric side.

Intestinal Anastomosis.—The formation of a fistulous communication between the bowel above and below the seat of obstruction should take the place of resection and circular enterorrhaphy in all cases where it is impossible or impracticable to remove the cause of obstruction, or where the pathological conditions which have given rise to the obstruction do not constitute an intrinsic source of danger. Gastro-enterostomy and jejunostomy should always be made by approximation with partially or completely decalcified perforated bone-plates. In making an intestinal anastomosis for obstructions in the caecum or colon, the communication above and below the seat of obstruction can be established by apposition with decalcified perforated bone-plates, or by lateral implantation of the ileum into the colon or rectum. An ileo-colostomy, or ileo-rectostomy, by approximation with decalcified perforated bone-plates or lateral implantation, should be done in all cases of irreducible ileo-caecal invaginations where the local signs do not indicate the existence, or occurrence, of gangrene and perforation. In all cases of threatened gangrene and perforation the invaginated portion should be excised, both ends of the bowel closed, and the continuity of the intestinal canal restored by making an ileo-colostomy by approximation with perforated decalcified bone-plates or by lateral implantation. The restoration of the continuity of the intestinal canal by perforated approximation-plates, or lateral implantation, should be resorted to in all cases where circular enterorrhaphy is impossible on account of the difference in the size of the lumina of the two ends of the bowel. In cases of multiple gunshot wounds of the intestines involving the lateral, or convex, side of the bowel, the formation of intestinal anastomosis by perforated decalcified bone-plates should be preferred to suturing, as this procedure is equally, if not more safe, and requires less time.

¹ Taken from the *Medical Record and Register*, Philadelphia.

Adhesion Experiments.—Definitive healing of an intestinal wound is only completed after the formation of a network of new vessels in the product of tissue-proliferation from the approximated serous surfaces. Under favourable circumstances quite firm adhesions are formed between the peritoneal surfaces within six to twelve hours which effectually resist the pressure from within outward. Scarification of the peritoneum at the seat of approximation hastens the formation of adhesions and the definitive healing of intestinal wounds. Omental grafts, from one to two inches in width, and sufficiently long to completely encircle the bowel, retain their vitality, become firmly adherent in from twelve to eighteen hours, and are freely supplied with blood-vessels in from twenty-four to forty-eight hours. Omental transplantation, or omental grafting, should be done in every circular resection, or suturing of large intestinal wounds, as this procedure favours the healing of the visceral wound and furnishes additional protection against perforation. The speaker presented some valuable specimens in which the operation had been performed on dogs; these specimens fully illustrated the value of the method advocated, and its entire feasibility, the union in some of these specimens being most remarkable. He called attention to its use in stenosis of the pyloric orifice. The duodenum or the first convenient coil of intestine being connected with the stomach by the method advocated, adhesions would form in from fourteen to twenty-four hours. The adhesions in the specimens shown were wonderfully firm and strong.

Dr. W. T. Oppenheimer, of Richond, Va., exhibited in section of anatomy several photographs of **An Apparatus for the Treatment of Fractures of the Surgical and Anatomical Neck of the Humerus**. He spoke of the great difficulty in keeping the fractured extremities of the bone in apposition, and thought that his apparatus covered the three necessities of extension, counter-extension, and fixation. The apparatus consisted of strong iron bands, which were fastened around the thorax by means of plaster of Paris, and which extended to the fractured arm, holding it firmly at the shoulder, upper arm, and forearm. He had used it in several severe cases of fracture of the neck of the humerus, and suggested using it in fracture of the clavicle and in excision of the elbow-joint.

The President, Dr. Pancoast asked when passive motion was commenced.

Dr. Thomas, of Pittsburg, Pa., thought it did not matter what apparatus was used, so long as the arm was held out from the body. He admitted, however, that he had never treated a case in that way, but thought it formed the principle of Dr. Oppenheimer's apparatus.

Dr. Oppenheimer replied that in about five weeks passive motion was commenced. He said when the plaster jacket was put on well, and the bands were strong, that no movement of the body could cause crepitation.

The President asked if a corset of leather or of other material could not be used instead of the plaster of Paris, which, in his opinion, seemed a little clumsy for such treatment. He also thought that in using crepitation there was danger of tearing the periosteum, and thus cutting off the blood-supply of the fractured ends.

Dr. John Homans, of Boston, read a paper entitled **Three Hundred and Eighty-Four Laparotomies for Various Diseases, a résumé of the writer's experience**. In these cases he was in the habit of using drainage-tubes, cleaning them once in about four hours; but he did not consider that they drained the abdominal cavity, although Keith, of Edinburgh, has in his possession about two gallons of fluid secured in this manner from one patient. In his own practice, he had had one case of tetanus after laparotomy, the patient dying at the end of six days; one case of stone in the bladder, from hair, falling in, forming a nucleus. The greatest number of consecutive recoveries he had had was thirty-eight. He considered that suppurative cysts of the ovary were very rare, only one having come under his notice, and he believed that they did not exist unless exposed to the air or a mucous surface. The removal of sessile tumours was quite a knack, which was only acquired after long experience. The preference of procedure by the writer was the extra-peritoneal, using the wire écraseur, and if the bladder was injured during the operation a soft catheter was retained in the urethra. In five cases of bleeding fibroids, one he had cured, the second relieved in part, and the third received no benefit. Another case, in which the uterus was removed, the patient died. In one case of abscess of the ovary, the patient recovered. The writer called attention to that condition in which feces exude from the umbilicus through a tube called the "omphalo-mesenteric remains," one case coming under his care. The patient afterwards died from marasmus. One case of tubercular peritonitis he had cured. He had had five cases of artificial anus, with three cures; one case of cystic tumour in which, during the operation and opening of the sac the woman gave a violent cough, and the cyst was forced clean out by the effort. In one case of laparotomy, performed January 27, 1886, the patient was con-

fined in December of the same year. A case of fibroid tumour of the uterus was gradually expelled through the wound in the abdominal wall. The speaker saw no reason why contractions should not occur in this manner as with any other foreign body in the uterus; the removal of uterine appendages in his own practice for nervous diseases had not given good results, only one case being cured; a woman who was very violent during her menstrual period, and who had commenced sexual intercourse at seven years of age, was relieved of her mania, but her mind was weak. He had had two cases of myxo-lipoma, one in a man and the other in a woman; the man died eight hours after the operation. The speaker had performed laparotomy upon him once before, but refused to remove the tumour; the second time the man begged to be relieved of it, and the attempt was made, fifty-two pounds being removed, and other portions were left. He had performed laparotomy once for perityphlitic abscess, and the patient recovered.

Dr. Addinell Hewson, of Philadelphia, presented a paper (which was read by the Secretary) purporting to claim that the main point in laparotomy was the closing of the abdominal wound without sutures. This was done by means of binders' paste and a certain prepared gauze, called **Donna Maria's Gauze**, and which was first made some forty years ago; this gauze, however, cost \$5 per yard. The writer was not partial to wet dressings, and the present paper was reserved to dry dressings.

Dr. I. M. Matthews, of Louisville, Ky., read a paper entitled **When is Colotomy Justifiable?**—The writer had had twenty years' experience in rectal surgery, and he did not consider colotomy justifiable in cancerous disease of the rectum when located three inches from the anus; again, not in stricture beyond the reach of the finger, nor in aneurism, nor in cases of specific origin. In most of these operations life was not prolonged; he had seen as many live without it as with it. The speaker considered the pain in cancer to be inherent. In the division of stricture, he did not consider there was any danger, as the hemorrhage could be controlled. In small ulcers of the gut, he did not believe in operating, antiseptic and internal treatment being preferable, using proper nourishment in such cases. In congenital occlusion of the rectum he did not think it should be recommended, but that the perineal operation should be done. When the sigmoid flexure is blocked the speaker thought it justifiable. The question then arises, what is to be done in the majority of cases for stricture? Linear rectotomy, not colotomy.

The paper was discussed by Professor Dawson, of Cincinnati, O., who quoted a case of cancer of the rectum within reach of the finger; patient suffering fearfully, and upon whom he intended to operate. He agreed generally with Dr. Matthews. He had really never performed colotomy which gave him satisfaction. In syphilitic cases of stricture he had found they could be treated constitutionally.

Dr. Quimby, of Jersey City, asked how nearly the gut was occluded.

Dr. Dawson replied to about the size of the little finger, the edges hard as wood.

Dr. Quimby agreed with Dr. Matthews on this point, and thought there would not be much gained.

Dr. Samuel Benton, of London, England, remarked that if he could get beyond the cancer he performed the operation, but if the growth was high up he performed colotomy. It had not been his experience that colotomy should not be performed in cancer of the rectum; his last case lived sixteen months after; he considered pain was relieved by colotomy. Cases of benign stricture he treated with electrolysis.

Dr. Hamilton, of Columbus, O., gave most rigid cautions against the use of carbolic acid in the rectum, the use of which he could not condemn too strongly.

The discussion of abdominal surgery was first taken up. Dr. W. N. Hingstone, of Montreal, thought that when any doubt existed as to the course of the bullet, operative procedures were necessary. The speaker considered the paper by Dr. Senn the most able he had ever heard. Regarding Dr. Homan's paper, he had mentioned that ventral hernia occurred in ten per cent. of his cases; this the speaker considered rather large. Dr. Homan had stated that he had operated for nervous affections in five cases; one was relieved, the other four were not; other professional men had given the opposite result. The speaker remarked that he believed Dr. Homan, but did not believe the others.

Dr. J. B. Murphy, of Chicago, remarked that in regard to the incision being made in the median line, he was in one case compelled to deviate from this rule in order to reach the gut. If the operation is not dangerous to life, he considered it compulsory, and if the bowel is not injured it does no harm.

Dr. W. T. Peck, of Davenport, Ia., remarked that as regards foreign substances in the peritoneal cavity, he had put forty-seven sutures in an ovarian cyst.

Dr. S. C. Gordon, of Portland, Me., stated that out of eighty cases he had seen three of ventral hernia; he had operated in thirty-three

hysterical cases, and twenty-five would say to-day they were cured, which differed from other statements made.

Dr. Cowden stated that he himself suffered from invagination of the gut (referring to Dr. Senn's paper), but the finger inserted into the bowels could just reach it; after days of suffering a long rubber tube was inserted into the rectum, and a large bottle of water secured at the other end and gradually raised; suddenly there was a sharp report and the abdomen was distended. The speaker thought the gut had been ruptured, but the invagination had been reduced, Dr. Senn's proofs upon dogs notwithstanding.

Dr. T. G. Richardson, of New Orleans, remarked that his experience in these cases was that the percentage in the negro was in excess of that in the white man.

Dr. Donald Maclean, of Detroit, Mich., read a paper on **three Cases of Surgical Disease of the Kidney, with an Account of Operations Performed for their Relief, the Complications which arose, and the Results.** The first case mentioned was that of a woman, twenty-one years of age, who was supposed to be suffering from an ovarian tumour. Laparotomy was performed. The patient entered the hospital in October, 1884, and in January, 1885, was perfectly well. The second case was a woman, forty years of age, the same result being secured; all trace of kidney-tissue had disappeared in the immense cyst. The third case was a child, twenty-two months old; this case resulted fatally.

The next paper, by Dr. Neudörfer, of the Austrian Army, entitled, "On the Present Stand-point of Antisepsis and the Best Mode of its Application in War," was read by title, after which an instructive paper, by Dr. B. A. Watson, of Jersey City, on the **Primary Treatment of Gunshot Wounds**, was read. The author first adverted to the requisite qualifications of a military surgeon, and the duties required of him; discussed the selection of a proper site for a field station, and the means which should be adopted primarily for the arrest of hæmorrhage. As the ligation of arteries is only, under the circumstances, exceptionally required, compression should be relied on to control hæmorrhage. The author urged the importance of removing all foreign bodies from the wounds, and advocated the occlusion of the wounds of entrance and exit with aseptic bandages and compresses. Thoracic and abdominal wounds cannot be treated at the field station, and should be removed from the scene of action as rapidly as possible. Bayonet wounds should be treated in the manner suggested for gunshot injuries, while wounds produced by large projectile fragments of shells, and the like, should receive the treatment usually recommended.

Dr. W. N. Hingston, of Montreal, Canada, discussed Dr. Maclean's paper. He remarked that he agreed with him in all but one thing—viz., regarding abdominal section. He had operated in three cases; in two of these cases he had made the abdominal section, and both patients died from the shock. In the second case he performed the lumbar incision and the patient survived, and there was but little disturbance of the system after the operation. The speaker considered the lumbar incision advisable in all cases where possible.

Mr. Edmund Owens, of London, England, thought there were three factors which should guide us in the operation. If there was a doubt about the operation, it should be done through the abdominal wall. Again, the size of the tumour must be considered, and in what line of the profession is the operator called, gynecology or surgery. This latter will often decide the point according to the ground he is apt to go over.

Dr. Hardy, of Indianapolis, mentioned a fatal case where the median incision was made.

Dr. F. Lange, of New York, used the lumbar incision; and if the tumour was too large to be removed, he thought it a good plan to incise it and perform a second operation when it had been reduced.

Dr. Maclean, in conclusion, remarked that perhaps he was not quite understood, as he had distinctly stated in his paper that where the lumbar incision could be performed it was preferable. In the cases he mentioned he had no choice. His first case the speaker thought was an ovarian tumour, and naturally made section in the median line.

Dr. Richardson, of Boston, read a paper on **Gastrostomy for Foreign Bodies in the Throat.**—A patient (male), thirty-seven years of age, was presented to the Section, from whom the doctor had removed a plate with four teeth attached from the lower portion of the œsophagus, about one and one-half inch from the stomach-entrance, by performing gastrostomy. When first seen by the doctor he could discover no obstruction, but the man was, however, retained in the hospital. He was finally discharged apparently well, the pain at the point indicated by him having subsided, and he was able to eat his meals. Eleven months later he returned very much emaciated, the pain returning and being much more severe, gastrostomy was decided upon and the operation performed, the opening being made large enough to admit the hand; the plate was then discovered in the location

stated. Owing to its long retention a small abscess had formed there, which subsequently ruptured, the patient making a rapid recovery. The speaker remarked that had he been certain the plate was there, he was positive he could have removed it with the forceps; but the difficulty lies in locating, and also the location of the cricoid cartilage and the cardiac opening. He had operated in sixty cases, and found the average distance from the incisors to the cardiac opening to be fourteen and one-half inches; the longest was seventeen inches, and the shortest ten and one-half inches. The writer described accurately, on the black-board, the anatomy of the parts and location of the plate removed; showing that by gastrostomy or œsophagotomy the œsophagus would be reached at all points with ease.

Dr. F. S. Dennis, of New York, read a paper on **Amputation of the Hip-joint for Sarcoma.**—The case was quoted in order to induce surgeons to report such cases and the results. Out of twenty-eight cases of sarcoma of the thigh, only two were living. The case at present was a young man seventeen years of age; family history was excellent. Five months before entering the hospital the swelling in the left thigh commenced; it had been aspirated, and ten ounces of fluid removed. The tumour when seen was ten inches in length, and twenty-seven in circumference, the inguinal glands were slightly enlarged. The diagnosis of sarcoma was made, and amputation at the hip-joint was decided upon. No elastic bandage was applied to the leg, but a strong rubber band was passed around the thigh above the joint, which controlled all hæmorrhage, and the operation was a bloodless one. On the sixth day the dressings were removed, and the wound was found to have united by first intention; temperature did not rise over 100°, and only reached that point on one day. The points worth noting are:—(1) this patient had a sarcoma, with no hereditary taint; (2) there was no exciting cause; (3) the great rapidity of growth; (4) absence of metastasis; (5) rapid return to health, as the boy is perfectly well now; (6) importance of secondary hæmorrhage; (7) unfavourable prognosis in his condition; (8) the diagnosis was confirmed by the microscope in the hands of Dr. Grower; (9) abscess limited to shaft of bone; (10) absence of a spontaneous fracture of the femur; (11) large size of the mixed cells of the sarcoma; (12) radical removal of the tumour by amputation at the hip-joint, not at the upper third of the thigh.

Dr. Garmody, of New York, read a paper on **The Surgical Treatment of Traumatic Insanity by means of the Trephine.**—The speaker reported the case of a young woman who was struck on the head with a brick, causing depression of the skull; she had been trephined shortly after, but ten years later she began to exhibit symptoms of insanity; trephining was suggested by the speaker, and the operation followed out, the space after the operation being three and a half inches by two inches. No elevation of temperature followed, and at the end of twenty-one days she was perfectly rational; the wound united by first intention.

Sir James Grant remarked that the case was an interesting one, and in his experience of brain surgery he had found that the lower type of brain would bear a fracture of the skull much better than those of an intellectual type. He quoted the case of a mill-hand who fell out of a window and fractured his skull. The speaker was sent for, and on his arrival found the man walking about, and yet there was a depression in which the finger could be inserted; the brain he considered became very sensitive in educated individuals.

Dr. Burney read a paper, on behalf of Dr. Richardson, of St. Louis, on a case of **Gastrostomy for the Relief of Foreign Bodies in the Throat.** The speaker also mentioned a case in which he himself had operated, a man having swallowed an ordinary plated case-knife (the latter he presented at the meeting). While playing with his family the knife slipped from his fingers as he pretended to swallow it, and really did. The writer did not believe in the continued suture in this operation, but the interrupted, one and one-eighth of an inch apart.

Dr. Manley, of New York, read a paper on a case of **Gun-shot Wound of the Large Intestine, with a Successful Result by Laparotomy.**—The patient was operated on twice. The speaker considered that opening of the peritoneal cavity of a man was far different to opening that of a woman, and liable to more risks; the breathing of a man is largely abdominal, while that of a woman is almost entirely thoracic; the incision in the man should not be a bit larger than is necessary, because of his labourious work being liable to produce ventral hernia after recovery. For exploratory operations he made the median incision, but thought there might be exceptions to this rule. In regard to the drainage-tube in these gunshot wounds of the abdomen, he thought there was no need of them when the peritoneal cavity was healthy and laparotomy performed soon after the injury, and although he had put one in in the case spoken of, he should not do it in the next one. Of course there might be exceptions, but he believed the tube was a source of irritation and more liable to produce hernia.

Dr. Robert Newman, of New York, read a paper on the **Use of the Galvano-Cautery Sound**, particularly in hypertrophy of the prostate gland, with report of cases. The application of the cautery, he stated, would depend much on the condition of the patient, but it averaged about from every three to six days; the cautery was not to be red hot, but simply to show a bright light. The apparatus was exhibited to the Section. The advantages claimed are that there is no hemorrhage, the healing is more rapid, and there is no septicæmia. Out of these cases ninety-one per cent. are made comfortable and given a new lease of life.

Dr. Carnochan, of New York, presented a remarkable specimen of **Bony Union of the Neck of the Femur within the Capsule**, after fracture, occurring in a woman seventy years of age. As she had plenty of means she had every attention. She was kept in her fracture-bed for nine months, rest being the method of treatment. The value of the specimen was very great, especially in courts of law.

Dr. F. Lemoyne, of Pittsburg, presented some drawings of an united fracture of the femur, and history of a successful case in which he had applied his method of treatment—viz., **Double Splice and Wired Clamps**.—The treatment has been successful in three cases—two of the humerus and this one of the femur. The bone was cut down upon and the fragments found to be overlapping nearly three inches. The ends were sawed off, the upper fragment in the form of a wedge; from the lower one a wedge-shaped piece of bone was removed, so that the upper fragment fitted into it. A hole was drilled in both bones about one and a half inches from the fractured ends. A stiff, flat, steel bar, with a prong at either end, was placed lengthwise on the surface of the bone, so that the prongs were inserted into the holes; a stout piece of wire was then passed around the clamp and femur at either end, and twisted close up, holding the clamp in position. The wires and clamp remained there nine weeks, when the wound was re-opened and the clamp removed. The bone was firmly united, but the limb is two and a half inches shorter.

Dr. Manley, of New York, stated that he had had considerable experience in wiring bones, and thought the bones when lapped very much should be wired at the first; the wires he always left in, as they did no harm. In one case of compound comminuted fracture he had followed this method and secured perfect union.

Dr. Quimby, of Jersey City, stated that he could hardly approve of this method.

Dr. Lemoyne remarked that he thought his method was original, and previously everything else had failed, the man having undergone a number of operations prior to his treatment, and all of his cases so treated had met with success; he did not believe in wiring in primary fractures.

Dr. Gibson exhibited some wire extension splints for fractures at or near joints; he had used them since 1879.

Dr. George Assaky, of Bucharest, Roumania, read a paper on **Iodol in Surgery**.—The conclusions arrived at were: (1) Wounds unite under iodol by first intention. This union, however, being the result of various and complex conditions attending operation, it is not possible to attribute to iodol alone the absence of suppuration and inflammatory conditions. In wounds which gape and suppurate iodol is an excellent antiseptic. It rapidly retards suppuration, renders it inodorous, reduces the frequency of dressing, and considerably hastens cicatrization. In ulcerating or gangrenous wounds iodol aids in resisting the destructive process, and changes the wound, after a variable time, to a healthy, granulating condition. This action of iodol extends itself to hard chancres. In cases of soft chancres the result is variable. Sometimes it transforms them into a simple wound with brief delay; at others it is insufficient for this purpose, and it becomes necessary to employ in addition, locally, antiseptic lotions. The same is true with reference to open venereal buboes of the groin. The powdered iodol has this advantage over iodoform, that it is free from odour and is not toxic in its effects. (2) Doses of iodol of from 0.40 centigrammes to 2.0 grammes, daily, produce no functional trouble, even if continued a long time. These doses give marvellous results in tertiary syphilis and in scrofulous affections. In the secondary stage of syphilis, taken internally, it rapidly destroys the syphilitic manifestations. Iodol seems to aid the general nutrition and increase strength and flesh. It is indicated in all cases of specific malnutrition. Iodol is an antipyretic. In acute infectious diseases, such as erysipelas, etc., it causes a rapid fall of temperature.

Dr. Milton J. Roberts, of New York, read a paper on **A New Method of Operating on Bone by means of the Electric Osteotome**.—The speaker presented an elaborate apparatus for this purpose, of most ingenious mechanism. One member remarked that he feared such a display would make the patients feel rather nervous, if seen by them. The osteotome consisted proper of a hollow cylindrical handle, protruding from which was the shaft of the instrument, at the end of

which was a small wheel with teeth like an ordinary finger-saw; the base of the handle was connected with the electric batteries by means of the covered wires usually used in all electric batteries; anterior to the handle were "cut offs," which could be worked by the forefinger and thumb, disconnecting the current in an instant, and checking the revolutions of the saw-wheel just as quickly; according to the diameter of the bone, different-sized saws were adjusted. In connection with this was a set of drills for drilling into any part of a diseased bone and removing the sequestrum or dead tissues in the bone cavity, the cavity being illuminated by a small electric light thrust in at different stages of the operation in order to secure removal of all carious bone. The femur was exhibited, the head of which had been drilled in this manner, the drill-opening into the bone being three-eighths of an inch in diameter, while the entire inside portion had been removed by the drill. The question was raised as to the cost of such an apparatus being beyond or more than the surgeon would care to invest unless making a speciality of such diseases, and one gentleman affirmed that he could perform all the work which this instrument did with the regular dental drill, and that he had done it on several occasions, borrowing the drill from a neighbouring dentist.

Dr. Close, of Illinois, thought the chief advantage of the apparatus was that the operator does not necessarily require skilled assistance, as the current was controlled by the hand in which the instrument was held, while the left hand was at liberty. He had been in the habit of using at times the band-wheel engine for such purposes, but found it too slow; in order to cut bone the saw must revolve quickly in such an apparatus.

Dr. Roberts, in conclusion, said that he had tried the dental engine many times and found the revolutions too slow, and it was for that reason he had set to work in order to secure the best possible method of moving bone in such cases; when the wheel revolves slowly the bone-tissue is torn; had it been satisfactory, he would not have spent the time and money in bringing forward a new instrument. In operating, the periosteum is not lifted or removed, but cut through with the bone. The speaker also exhibited, some instruments for measurement, which would record the exact size of the bone to be removed in cases of deformities, etc.

Dr. Moore, of Richmond, Va. (Section of Military Surgery), after a few preliminary remarks, read his paper, entitled on the **Treatment of Penetrating Gunshot Wound of the Abdomen**. The author gave statistics of cases of this nature and the rate of mortality, and quoted at length from reports of the French and British army. No surgeon had, in his opinion, had sufficient experience with this operation, which was comparatively a new one, to be considered an authority on disputed points. He spoke of the difficulties of diagnosis of perforation, and advocated the exploration of the wound with some delicate instrument. The incision should be made only sufficiently large to allow a thorough exploration, and the earlier after the reception of injury, barring the occurrence of shock, the greater were the chances for recovery. It is the opinion of Sir William Malcolm that if the operation be delayed twenty-four hours no case ever recovers. In conclusion, he advocated supporting measures and the use of quinine hypodermically previous to the operation, to diminish the liability of resultant shock.

Dr. Varian's views were in harmony with those of Dr. Moore so far as civil practice is concerned, but the question still to be discussed was the treatment of such cases upon the field of battle.

Dr. Watson, of Jersey City, agreed with Dr. Morton.

Dr. Bentley, of Little Rock, Ark., dissented from the opinion of Dr. Morton, and regarded the application of the method of treatment as impossible on the battle-field, as it is an operation which requires skill, time and care. He, however, recognized its value in private and hospital practice, where all the conditions are favourable.

Dr. Carnochan, of New York, presented a specimen of **Double Dislocation of the Hip-joint**. He remarked that previous to 1820 this condition was unknown, but in 1826 Dupuytren first brought it to the notice of the profession. The speaker stated there were various theories as to the causation of this condition, among which were carelessness of the accoucheur, movement of the foetus in utero, etc.; the question arises, also, as to whether it is really a dislocation or a malformation.

Dr. R. T. Morris, of New York, stated that he did not think that it could be caused by careless handling of the physician, as in the northern part of Germany it was quite common, and they certainly had skilled physicians there. He thought it might be due to arrest of development.

Dr. Post drew attention to the two classes of cases, one of which seemed to be rachitic; but he had seen it occur in healthy infants with a difference in length of limbs. A few weeks since he saw a case in which the head of the bone was in the thyroid foramen; the speaker could only account for it that the child moved in utero.

Dr. Henry James, of Waterbury, Vt., read an important paper, giving the results of his experience during the late war, with **Gun-shot Fractures of the Femur**.—The author's conclusions upon this interesting subject are based upon the results of no less than 427 cases occurring in his service, and treated by himself, or under his immediate observation, in two field hospitals in his charge during the year 1862 and 1863. Of these fractures 95 were in the upper third of the bone, all of which were treated conservatively, giving a mortality of forty-six per cent. at last reports; 125 were in the middle third, 102 of these being treated conservatively, with a mortality of thirty-two per cent.; 23 were amputated, mortality forty per cent.; 207 cases were in the lower third of the bone; 67 of these, not including knee-wounds, were treated by the conservative method, with a mortality of twenty per cent.; 140 cases were amputated, resulting in a mortality of thirty-five per cent. Besides these 427 cases, there were 34 fractures involving the knee-joint, treated conservatively, with a mortality of eighty-five per cent. The cases requiring amputation terminated earliest, but about one-eighth of them suffered from painful and tedious osteitis. Up to about forty years of age, advance in life did not seem to increase the rate of mortality. The author's conclusions are the following:—Antero-posterior wounds did no better, in his experience than the transverse. Fractures caused by bullets moving with great velocity were fraught with more danger than those moving at a lower rate of speed. Wounds occurring in prisoners did not do so well as those in their captors under the same conditions; this was probably due to the incident moral influences. Gun-shot fractures sometimes united as readily as simple fractures. False joint occurred but once among the two hundred and sixty-three cases treated conservatively. Secondary hæmorrhage occurred only in nine cases, in several times it was incident to septic poisoning. Tetanus only occurred once. Hospital gangrene seemed to be induced in the autumn of 1863 by bad ventilation and the occurrence of cold, damp weather. The shortening, in the cases which completely recovered was generally of more than one inch; it was, in several instances, increased by the too early use of the limb. The formation of callus was sometimes so irregular and excessive in amount as to impede muscular action; it sometimes encroached upon an artery or nerve and caused secondary hæmorrhage or neuralgia. In some cases the callus was absorbed in the course of septic inflammation. Refractures, caused by falls and similar accidents, generally reunited readily when the wounds in the soft parts were healed. The limbs often became much more useful than any artificial substitute; the author has unfortunately no statistics bearing upon this subject to offer. Regarding the treatment of injuries of this nature, he would enjoin the surgeon *not* to saw off the ends of fractured bones, and not to use too much force in tearing off fragments of bone still attached to the periosteum. Moderate, simple extension by the weights and pulleys is the best in the majority of cases; in some of the cases that did the best no extension was used. He would advise the dry dressing of wounds, with plenty of absorbents, rather than with water-dressings. Strict antiseptics, according to the modern idea, is impossible in large hospitals on the battle-field. In conclusion, the author spoke of the necessity of a liberal diet, the intelligent use of stimulants, and due regard to the sanitary precautions in the camp or hospital in which this class of injuries are treated.

Dr. Robert Reyburn, of Washington, desired to know what proportion of the doctor's cases had been treated in tents and in buildings.

Dr. James said the majority of the cases were treated under canvas, with free access of air; with the advent of the cold and damp weather of winter, the ventilation was not so perfect, as it was difficult to impress upon the soldiers the importance of free ventilation, at a time when they were suffering from the cold. It was, as previously stated, at this time that hospital gangrene set in.

Dr. Reyburn said, in my experience, the kind of hospital in which the wounds under consideration are treated has much to do with the mortality; the treatment in tents I consider the best; unfortunately, most of the cases observed by him in the service could not be treated under such favourable conditions, and he had to report a mortality of about seventy-five per cent. The results achieved by Dr. James were most remarkable, and show what can be done by conservative surgery.

Dr. E. Griswold, of Sharon, Pa., who read a paper entitled **What Conditions on the Field Justify Amputations in Gun-Shot Wounds?** The author claimed that amputation on the field of battle cannot always be done, although the established rule of surgery, as well as the opinion of the surgeon, may demand it in many cases in which it is not done. The exigencies of war often separate the surgeon from his equipments and deprive him of the means of action, or he may be over-worked and unable to attend to his duty. The surgery of to-day and of the future makes it necessary for military surgeons to be supplied with means by which æssepis can be practised upon the field in the treatment of wounds, and this can be done and made practical wherever an adequate supply of water is attainable, if a rapid method of filtration

and purification is available. The possibilities of antiseptic surgery are already largely developed, and the military surgeon of the future must know what it is to be expected in the way of conservatism; and when his patient, having a severe gun-shot wound in one of his extremities, is found to be clearly beyond the reach of conservatism, he is not only justified in amputating in the field, but it is his bounden duty to do so.

Dr. Bontecon said he would practise conservative surgery when there are arteries to nourish the limb and veins to carry the blood back from the injured member to the heart.

Dr. E. A. Wood alluded to other elements, such as shock, which must be taken into consideration in determining whether amputation be or be not required, and in some instances of probable deformity resulting, with consequent uselessness of the limb, the part should be excised.

Dr. Collins, of Pennsylvania, thought many cases that would otherwise recover died of the wear and tear incident to the transportation.

Dr. H. H. Biedler, of Baltimore, Md., adverted to certain operations for grave injuries having terminated fatally after amputation, from the operation itself, and without the complication of shock.

Dr. Griswold closed the discussion by saying that he had noticed that shock, in injuries of the knee-joint, seemed to be more serious than in those of the hip-joint. When the injury is such that amputation is clearly indicated, it should be done early: still, even in bad cases, conservative surgery was available, and an attempt should always be made to save the limb.

(To be continued.)

The Spirit of the Societies.

LEICESTER MEDICAL SOCIETY, January 13th. **Small-pox in Montreal.** By H. TOMKINS, M.D., B.Sc., Medical Officer of Health, Leicester.—From particulars obtained during a recent brief visit to Canada I have been able to bring before you an account of the terrible epidemic of small-pox which overtook Montreal in 1885-86. The origin of the outbreak was a conductor of a Pulman-car, who came from Chicago on the last day of February, 1885, suffering from a very mild attack of small-pox, and which was thought to be chicken-pox. He was treated in a large general hospital (the infectious hospital being at the time closed), and here the disease spread to a number of the other patients, etc. It was then decided to send all the patients to their homes in order that the building might be thoroughly disinfected. This step proved to be an unfortunate one, for amongst the 200 patients thus scattered in all directions, numerous other cases arose. For some years prior to this time Montreal had been free from small-pox, and owing to a certain amount of opposition, vaccination had not been enforced, with the result that a large number of parents had neglected to have their children vaccinated who were not opposed to the operation. Becoming thus planted in a susceptible population the disease rapidly spread, and owing to the absence of the notification of infectious disease, the health authorities were not made aware of all the cases that arose, and this also favoured its spread. By July the popular mind was becoming alarmed. Powers were obtained for enforcing notification of disease as well as vaccination, and large sums of money were spent in providing hospital accommodation, etc., and offenders were rigorously dealt with by the law. Among a certain section of the community these measures were at first opposed, and after a patient had been compulsorily removed to hospital who was in danger of spreading the disease in a thickly-populated community a riot arose, and considerable damage was done to various municipal and other public buildings. This, however, was soon subdued, and the people made to understand that the law must be obeyed. So rapid, however, was the spread of the epidemic, that by the end of the year no less than 3,164 deaths had taken place—a mortality surely unknown in any recent experience of this plague. Vaccination was now eagerly sought for, and so great were the crowds besieging the vaccination stations that the police had to be employed to regulate the traffic and maintain order. No less than 80,000 vaccinations were now performed in a population of something over 160,000. The following figures are instructive:

Of the 3,164 deaths there were	{	531	under 1 year of age;
		1,505	1 to 5 years of age;
		681	5 to 10 years of age;
		447	over 10 years.

3,164

So that there are 2,717 deaths of children under ten years of age, the very age at which, in properly vaccinated communities, the smallest number of deaths always occur. The figures from the hospitals are likewise most instructive. 1,332 patients were treated there, of whom 418 died, equal to 31.3 per cent. Of these 805 were not vaccinated, and 527 vaccinated. Of the 805 unvaccinated there died 315, or 39.1

per cent.; of the 527 vaccinated 103 died, or 19.5 per cent. And again, as showing how much more severely the children suffered, the following should be noted: Of the above 1,332 patients, 489 were under ten years of age, and 843 above that age. Amongst the 489 there occurred 202 deaths, while amongst the 843 only 216 deaths were recorded. What the cost of this epidemic to Montreal was can only be guessed at: loss of business, loss of health, expenses of sickness and death, etc., were all great; but the Health Committee alone spent some £36,000 in coping with it. The death-rate of the city, which averaged 26.7 per 1,000 in the five previous years, reached the enormous figure of 46.7 per 1,000, and the deaths exceeded the births by 1,522—a complete reversal of figures from ordinary times.

The lessons that may, I think, be learned from this outbreak are, that, given a susceptible material—i.e., an unvaccinated population—and small-pox once started therein has lost none of its old powers to maim and to slay. Secondly, there is demonstrated the absolute importance of some law being in force by which prompt notice of such diseases shall be made to the proper authorities; and thirdly, that there shall always be ready, without delay, good and sufficient accommodation for separating, when necessary, the infected person from the rest of the community, with compulsory powers to enforce removal when necessary, together with efficient disinfection or destruction of infected material, etc. Montreal has become wise by bitter experience, and to-day compulsory vaccination is in force, and the opposition to it has diminished to very small proportions; and in all cases where it is desired calf lymph is used by the public vaccinators. Compulsory notification of infectious disease is likewise in force, and proper hospital accommodation is available without loss of time. In the face of the evidence supplied by this outbreak, of the susceptibility to and mortality from small-pox in an unvaccinated population, surely a heavy weight of responsibility attaches to those agitators in this country against vaccination, influencing as they do chiefly the poorer and less educated classes, who are least able to form a right judgment on such a question for themselves, and who in all outbreaks of contagious disease suffer the most severely. Sheffield, a town much larger than Montreal, is to-day suffering from an outbreak of small-pox, but the mortality, especially among the vaccinated and among the children, is trivial when compared with the above.

At present no English community, not even Leicester, has in it so large a proportion of unvaccinated persons as Montreal had, and therefore are at present much more largely protected than that city was. It is only the last two or three years that the vaccination laws have not been enforced within this borough. When sufficient time has elapsed, as at Montreal, and the unvaccinated of the town shall become numbered by tens of thousands, a like catastrophe is only too possible, and those who are best familiar with the power of this disease to disfigure and destroy can but look forward to the future with the gravest apprehensions. Whether then, or for how long the present measures adopted here, admirable in themselves and highly to be commended, as far as they go, will suffice to keep the enemy from our doors, time only can show.

OBSTETRIC SOCIETY OF PHILADELPHIA.—At the last meeting of this Society Dr. HAMILTON recorded a case of **Puerperal Malaria Fever simulating Sepsis**. Pus and albumen were found in the urine of a young woman. An answer to the following questions was desirable:—(1) Was the right kidney chiefly affected, or was the pain on the right side referable to a morbid condition of the left kidney? (2) Were both kidneys diseased, or was one healthy? (3) Did the pus really come from the kidneys, or was it confined to the bladder? He was able to obtain an answer by the use of Dr. Kelley's urethral catheters.

Dr. SCHIEDT read a paper on the **Delivery of the after-coming Head**. He is of opinion that forceps constituted the best, quickest, and safest treatment.—Dr. WILLIAM GOODELL said the forceps was the only proper aid in the expulsion of the after-coming head.—Dr. M. PRICE said he made it a rule to have his forceps ready in breech deliveries.—Dr. LONGAKER said the forceps should be in readiness to apply as soon as the body had escaped from the vulva.—Dr. NELSON said he was as strong an advocate of the application of the forceps to the after-coming head as any man could possibly be.—Dr. J. C. MORRIS said the forceps should always be at hand, and there was no difficulty in putting them on.

PHILADELPHIA COUNTY MEDICAL SOCIETY.—Dr. E. J. BRUEN reported some cases of **Laparotomy for Tubercular Peritonitis; Pulmonary Cavity treated by Incision; Abscess of the Liver**. The first patient died nine days after the operation, the last patient on the following day. Dr. Bruen said that the liver can be safely explored with a moderate-sized aspirator needle, and that he had frequently practised this method in doubtful cases without any unpleasant consequences.—Dr. OSLER said that in these cases of abscess of the liver we should, if possible, arrive at an accurate opinion of the etiology of the abscess. To explore the liver thoroughly in a case of multiple abscess is a hopeless procedure.—Dr. W. H. PARISH said he had had no experience in exploring the liver for pus, but he would hesitate a long while before

accepting the statement that it is safe to explore an abscess in any organ where it was necessary to pass the needle through the peritoneal cavity. The thrusting of an aseptic needle into healthy liver tissue is, however, doubtless quite safe.—Dr. ROBERTS said he scarcely thought that tapping of the liver was such a dangerous procedure as would be indicated by the remarks of the last speaker. If he had a case of suspected abscess of the liver, he should introduce an aspirating needle in various directions with a great deal of certainty that he would do no harm.

SURGICAL SOCIETY OF PARIS.—At a meeting of this Society on December 21st, M. TERRILLON communicated a **New Series of Thirty-five Ovariectomies**, with four deaths. These patients died from causes apart from infection or peritonitis. M. Terrillon said he had often operated under conditions most discouraging, but had attained, nevertheless, unhoped for success. He condemned the spray as useless and even dangerous. He had discarded the ordinary sponge, preferring the tissue sponge used in Germany. Lavage of the peritoneum with warm water was indispensable in complicated cases, and he regarded the same as essential to obtain speedy action of the bowels. [It would appear that M. Terrillon has been reading with advantage Mr. Lawson Tait's papers.—*Reporter*.]—M. TRELLAT did not think it necessary to go to Germany for the sponges, as he used an artificial sponge, made of cotton gauze, rendered antiseptic by steeping in a solution of bichloride of mercury.—M. POZZI preferred a vegetable sponge, and he also thought it an excellent plan of purging the patients.—M. LUCAS CHAMPIONIERE said he always used the ordinary sponges with large cells. He saw no advantage in using artificial sponges.

CHICAGO MEDICAL SOCIETY.—At a late meeting of this Society Dr. JAMES H. ETHERIDGE narrated four cases of vaginal hysterectomy.

Case 1.—S—, æt. forty-seven, mother of nine children, with epithelioma of the cervix. Died from exhaustion in forty-five hours. "The autopsy revealed a small rent in the bladder, which was concluded to be the cause of the peritonitis."

Case 2.—C—, æt. thirty-six, small epithelioma of the cervix. In thirty-six days she left the hospital.

Case 3.—C—, æt. forty-nine, epithelioma of the cervix.

Case 4.—Incoercible hæmorrhage from a small fibroid in the posterior uterine wall. Doing well twenty-one days after operation.

In these cases hæmorrhage was controlled by Sweb forceps.

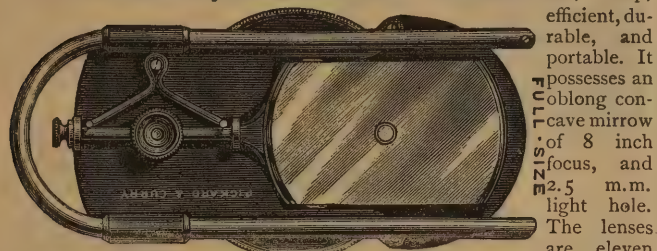
Dr. C. T. PARKES: I am very much pleased with this paper, in that it introduces a method of controlling hæmorrhage that has been satisfactory to me a good many times. We are indebted to Péan, of Paris, for this method. He depends upon it on all occasions and in all operations. It is not an unusual thing to find a wound that he has made containing a dozen of these forceps. He never uses a drainage tube. After seeing it done by him, I have resorted to the use of the forceps as a means of hæmstasis in all operations where it was difficult to apply a ligature, and especially in removal of carcinoma of the rectum. Anyone who has performed that operation knows how difficult it is to apply a ligature that can be trusted, high up in a wound so small as that made in the removal of a carcinoma of the rectum. And on several occasions I have left half a dozen forceps, removing them in twenty-four hours, without subsequent trouble. It saves a great deal of time, and is perfectly reliable. I do not think it is necessary, on all occasions, to leave the forceps on forty-eight hours. I think that after squeezing with the large jawed forceps for twenty four hours, there is scarcely any danger of hæmorrhage from a vessel the size of those that are included in it, and by diminishing the time of the retention of the forceps you reduce the danger of necrosis of the tissue contained in the forceps. Another point, I don't see the necessity of turning the uterus over, thus endangering the entrance of diseased tissue into the peritoneal cavity. The posterior wall is uncovered, the broad ligaments are exposed, and what is the use of turning the uterus over? These forceps will reach the top of it, and they will include the broad ligaments on either side, and they can be applied just as well with the uterus in position as if it were turned over. There is great necessity of keeping close to the uterus with the forceps. I think there is more danger with the use of the forceps, in including the ureter, than we are aware of, and if the operation is done where there is any probability of recovery, it does not do any harm to keep well up to the uterus. If the tissue is diseased beyond that point you might as well let the patient alone.

Dr. D. T. NELSON: I wish to quote a word from Martin, of Berlin, spoken before the International Congress, where this subject was discussed quite fully. He advocates the operation strongly, and made this important point, which I think was not too much emphasized by the reader of the paper, that the operation is not justifiable when the uterus is not movable. When the tissues above and about the uterus have become involved by the diseased condition, then the operation should not be done. Martin's later operations have been only upon this class of cases, and consequently the promise of success—permanent cure—has been far greater than it would otherwise be.

Surgical Aids and Appliances.

81.—A NEW OPHTHALMOSCOPE.

DR. WALTER H. JESSOP has devised a new instrument, cheap,



efficient, durable, and portable. It possesses an oblong concave mirror of 8 inch focus, and 2.5 m.m. light hole. The lenses are eleven in number, and comprise $\times 1 D$, $\times 2 D$, $\times 3 D$, $\times 4 D$, $\times 9 D$, $\times 20 D$; forestimating by the direct method most cases of refraction. The lense $\times 9 D$ is for the direct examination of the vitreous and lens, and $\times 20 D$ for that of the iris, anterior capules of the lens, anterior chamber, and cornea. The lens $\times 6 D$ can be replaced, if desired, by one representing the observers refraction.

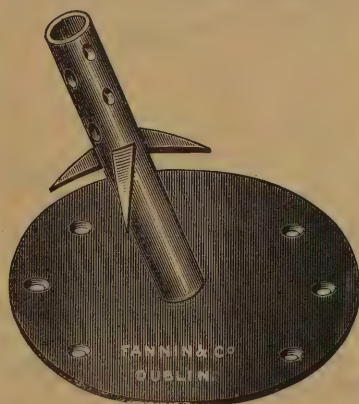


82.—NEW FIXATION FORCEPS.

THIS is also the invention of Dr. Ward Cousins, and the engraving exhibits its size and construction.

83.—A NEW DRAINAGE TUBE FOR EMPYEMA.

DR. FRANCIS J. HEUSTON, Dublin, has brought out a new drainage tube. It is about three inches in length, and has a very large flange composed of soft material, which hinders the tube



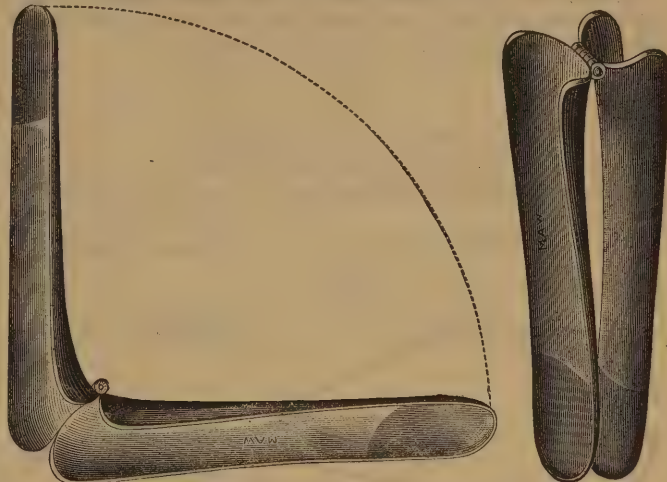
from passing within the thorax. About an inch internal to the flange are placed three wings, which hinder the expulsion of the tube by the patient's respiratory efforts. The tube is made of different diameters and length.

84.—A NEW SURGICAL NEEDLE.

DR. JOHN M. H. MARTIN, Blackburn, has made an improvement in surgical needles. The eye is fixed at right angles to the body, and close up to a shoulder on each side, so that silver wire or other material passes readily through without any hitch.

85. NEW VAGINAL SPECULA.

MR. SMYTHE'S. — The accompanying illustration shows Mr.

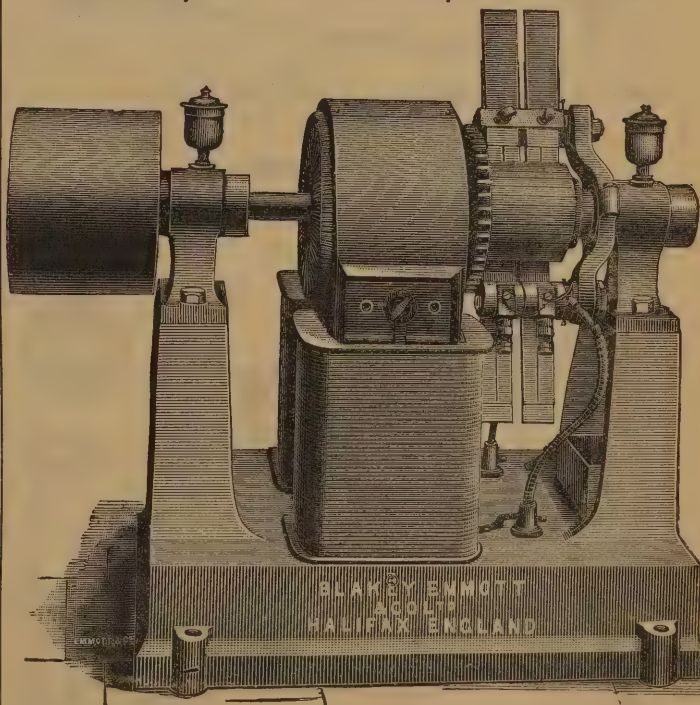


Butler Smythe's instrument open and shut. Its extreme portability is apparent.

DR. FLOYER's Vaginal Speculum consists of two valves and a coggled bar.

86.—DYNAMO FOR SURGICAL PURPOSES.

At the Ninth International Medical Congress, Dr. T. H. Martin, Professor of Gynæcology, Chicago Polyclinic, read a paper on "A Modification of Apostoli's Method." In the course of his paper he exhibited a new form of dynamo to take the place of the ordinary batteries in use. We have shown the drawing, as in the *Medical Record*, to a practical firm of electricians, and they are prepared to make their own dynamo in such a size and style as to meet all the



requirements of practice, and to have such armatures as will generate two distinct currents. For hospitals the dynamo is particularly suited, and it promises to be a very useful addition to the armamentarium of the gynæcologist. The drawing shows the shape of the Blakey Emmott Dynamo, which they are willing to supply to any hospital-electrician for trial on very liberal conditions.

87.—IMPROVED BINAURAL STETHOSCOPES.

1. DR. KERR, Bath, has devised a new instrument, consisting of two short metallic ear pieces, and a chest piece, connected by gutta-percha tubing fifteen inches long. It is cheap and portable.

ARNOLD'S STETHOSCOPE.

2. MESSRS. ARNOLD AND SONS have brought out a new single binaural differential stethoscope, percussion hammer, and pleximeter

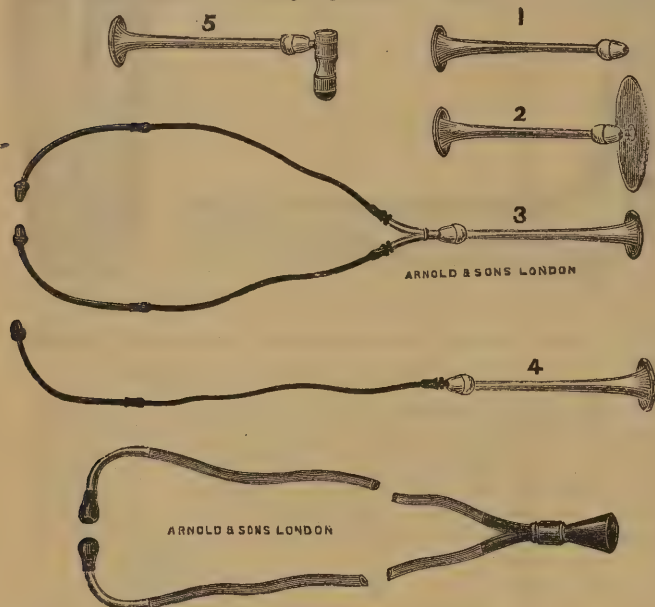


plate. It is called Pickering's "Panarkes" Stethoscope.

BATTEN'S STETHOSCOPE.

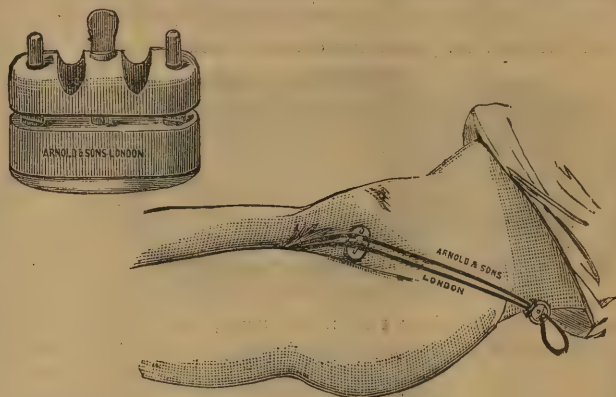
3. DR. BATTEN'S (Gloucester) Binaural Stethoscope consists entirely



of metal and vulcanite, and can be at once converted into a single stethoscope.

88. NEW PELVIC TOURNIQUET FOR AMPUTATION OF THE HIP JOINTS, AND OTHER AMPUTATIONS.

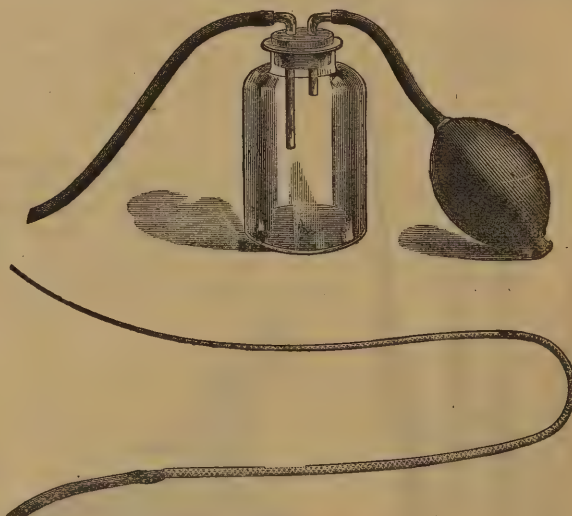
DR. WARD COUSINS has devised this instrument, which consists of



two parts, and which is a modification of his elastic cord tourniquet. The illustration explains its mode of application.

89. ASPIRATOR AND CAPILLARY CATHETER.

THE accompanying illustration shows Dr. Ward Cousins' Aspirator



and Capillary Catheter for retention.

Medical Miscellanea.

THE subject of our next illustration will be George Granville Bantock, M.D.

We shall publish in the March number an account of Woodhall Spa.

An American pharmacist states that there are 36,500 proprietary medicines in the market.

Mr. G. A. Philips, M.R.C.S., has been placed on the Peace for the borough of Walsall.

M. Pasteur has been awarded 12,000 francs by the Turin Academy of Sciences.

The *Blackburn Standard* is publishing a series of articles on the high mortality of that town. Such a step is needed.

A full-size copy of Rembrandt's "Lesson in Anatomy" has been presented to the College of Physicians of Philadelphia. Rembrandt was twenty-six when he painted this picture.

We congratulate Dr. Davy, Terenure, on the result of his trial. We trust that the prosecutor will be punished for perjury, and that some recognition may be made to Dr. Davy for his expenses.

We learn from the *Indian Medical Gazette* that the cultivation of ipecacuanha is making good progress in the Southern Presidency. Last year the number of plants increased from about 200 to over 700.

The St. Dalmas Plasters, Leicester, maintain their superiority in the medical market. Their bandages we have used for some time, and can confidently recommend them.

The *Lancet*, because it has 3,000 pages of advertisements, claims to be the representative organ of the profession. We have come to a pretty pass when such a plea can be urged as a claim to a first place in medical journalism.

Dr. H. Keane stated at the last meeting of the American Gynaecological Society that during the past eight years, 804 books and 7,505 journal articles and pamphlets have been added to the literature of gynaecology!!!

The Academia dei Scienza of Rome offers a prize of one thousand francs for the best essay on Embryology, which is open to universal competition. The essay must be written in Italian or Latin, and is to be presented on or before December 31st, 1888.

Reviews of the following books will appear in the March number:—Hime's "Home Education," Brundell Carter's "Ophthalmic Surgery," Bryant's "Diseases of the Breasts," Hutchinson's "Syphilis," Erskine's "Diseases of the Ear," Harrison's "Diseases of the Urinary Organs," McVail's "Vaccination Vindicated."

"In China," according to the *New York Medical Record*, "when a person who has been bitten by a mad dog begins to show signs of rabies, he is strung up by the hands and feet, and left in this comfortable position until recovery or death ensues. No better results are reported from this than from Pasteur's method of treatment."

We recommend to our readers Dr. Handford's "Graphic Charts;" they are very complete, and for hospital practice meet all the requirements of note taking. There is space for notes of cases, and on the chart the temperature, respiration, and pulse can be seen at a glance. Other details as to sputum, vomiting, urine, can also be noted.

Medical writers to the lay papers will have to be on their guard if the Royal College of Physicians, London, pass the resolution proposed by their Senior Senator—viz., "That no fellow, member, or licentiate should contribute articles on professional subjects to journals professing to supply medical knowledge to the general public, or should in any way advertise himself, or permit himself to be advertised in such journals." The College will have to make a clean sweep amongst its fellows.

The Cigars de Joy may be tried, to alleviate the painful attacks of asthma and bronchitis in cases that are beyond the reach of an entire cure, although in many instances they have effected the desired relief permanently. It is obvious that the directions given with them should be rigorously observed. We recently observed relief was afforded without the absolute suppression of stimulants, the quantity taken being reduced to about one ounce per diem. The length of time these cigars have been before the profession and the public serves to inspire confidence.

Mr. Kenneth Millican's Action *v.* Managers of the Queen's Jubilee Hospital has been disposed of. Mr. Millican was suspended from his position as Hon. Medical Officer at the public hospital owing to his taking office at another institution where homoeopathy was practised. Mr. Millican applied for an injunction, which was granted by Judge Manisty. The Court of appeal reversed the decision with costs. *Punch* has the following in reference to the correspondence which has taken place in the daily papers over the case: "Oh, dear!" exclaimed Mrs. Ram, "when are those letters on the Opium Medicum going to stop! I declare when I try to read them I get quite drowsy."

Correspondence, Notes, and Queries.

Communications, Books, etc., should be addressed directly to the EDITOR, "The Provincial Medical Journal," Horton House, Halifax.

Matters of business should be addressed to the Publisher, at the Offices, 10, Friar Lane, Leicester; or to the London Representative, Mr. E. BELLA, 58, Charing Cross Road, W.C., to whom all communications respecting Advertisements should be addressed.

We cannot undertake to return rejected MSS. unless stamps sufficient for their postage are enclosed.

We shall be glad to receive reports of Medical Vacancies, Appointments, Meetings of Societies, etc.

Papers containing passages for consideration should be marked.

Correspondents must please attest their communications with their proper name and address (not necessarily for publication).

Contributions must be written on one side only of the paper.

MSS. intended for publication to be sent in not later than the 16th of the month.

The insertion of any letter in these columns cannot be taken as necessarily indicating our adhesion to the views or statements therein expressed. The same remark applies to articles to which a name or nom-de-plume is attached.

WHAT ARE THINGS COMING TO?

To the Editor of "The Provincial Medical Journal."

SIR.—As a looker on, perhaps you will allow me to say a few words on medical attendance and providence, especially as I have for many years paid particular attention to the welfare of the working classes, and encouraged them to prepare for a rainy day, and to insure against sickness, disease, and death.—First, by foregoing self-indulgence in the way of drink and tobacco, and by judicious expenditure of their hard earnings in wholesome food and suitable clothing. Secondly, by joining some *bond fide* benefit society, such as the Standard Benefit Society, or the Hearts of Oak Benefit Society, to which no particular doctor is attached, and out of which they can go to what doctor they choose. Thirdly, by insuring their lives, as we know there are only two certainties in this life, viz., "Death and Quarter-day." An ounce of fact is worth a ton of theory. I will give one fact. I was apprenticed to a doctor in a provincial town, and had to make up the medicines, keep the books, and to attend to the surgery. Now the doctor had several clubs, some of which paid at the rate of half-a-crown per annum for each member. One of the influential members connected with one of his clubs paid that large (!) amount, who suffered from gout and its attendant physical evils, induced by over-feeding and indulgence in the flowing bowl. To my certain knowledge he was taking medicine for three years. He had on an average two bottles of medicine per week, besides pills, liniment, and lotions! He therefore swallowed at least three hundred bottles of medicine, and had in addition one hundred and fifty visits, and yet he paid the enormous sum of seven shillings and sixpence merely for the lot!

He was a respectable tradesman, doing a very good business, and no doubt congratulated himself on his business tact in getting doctored on the cheap. He could have well afforded to pay the small sum of one shilling for each supply of medicine, which in three years would have amounted to £15, and 1s. 6d. for each visit, which, with the charges for the medicine, would have amounted altogether to £26 5s. 0d. What chemist would dispense the bare medicines at so insignificant a rate?

Of course there are many grandees in the medical profession as well as among the working classes to whom such fees as I have named would be considered unprofessional, too low, &c., and yet these sticklers for professional etiquette would rather work at starvation rates, under a contract system, than get moderate and reasonable remuneration for actual work done.

If the ten thousand persons who belong to the clubs, benefit and dispensary associations of Gloucester, paid 4s. per annum, that would make £200 for each thousand members to be attended during their illness by the medical man, of which I am convinced half of the proceeds ought to be expended on drugs, surgical instruments, and other necessary appliances. Now it is generally considered that a thousand persons ought to be a large practice for a medical man, demanding his serious attention, and it is absurd to suppose the remuneration is sufficient for a man of ability and experience. To a working man health means wealth, and medical men are no more than men, and reward sweetens labour. I maintain human life is too precious to be cared for in this wholesale manner.

As education improves no doubt these evils will be somewhat mitigated.

As things are no wonder medical men as a rule die insolvent. If a medical man grows rich when his practice is confined to club patients, he does so at the sacrifice of his honour and integrity! I have heard some unprincipled medical men who have large club practices boast of the smallness of their drug bills, but thank God they are few and far between. Underpaid work generally means scamping the work, and the labourer is worthy of his hire. Let working men act like men and sit and think over what I have ventured to say, and let them not be bound to any one doctor when the day of sickness comes, but let them deny themselves of all needless extravagance and join together in maintaining the birthright of every true Britain to be free and not to be a slave to any form of medical or other despotism, which I maintain many of the so-called clubs, provident dispensaries, friendly societies, are nothing more nor less.

In writing to you, I have no interests to serve except those of truth and of my beloved fellow creatures.

I am, Sir, your obedient servant,

RICHARD PARAMORE, M.D.

2, Gordon-square, London, W.C.,
January 14th, 1888.

TARDY CONVALESCENCE IN THE PUERPERAL STATE.

To the Editor of "The Provincial Medical Journal."

SIR,—I have often been surprised at the uncertainty of convalescence after parturition. I can recall three cases very vividly to my recollection within the last two years where the patients previous to their confinements were in their usual health. Two of them, the mothers of large families, had always been attended by midwives; they were in their usual health, and their labours were in every way natural; but, instead of being able to get up and be about on the 19th day, they lay prostrate, without pain, simply complaining of weakness, and unable to get up for many weeks. The third case I am attending now. She was delivered over three weeks ago of her tenth child; for a week afterwards she seemed to progress favourably, but since, has made no progress, only able to sit up in bed occasionally, and that for a very short time. Her temperature varies from 101 to 102. The lochial discharge continued about two weeks. Treatment consists of good support, of which, however, she is only able to take very little; and quinine with mineral acids as medicine. Could any of your readers recommend a different treatment for such cases, that would likely be followed by better results?

Yours truly,

J. M. G.

TO LESSEN POVERTY BY LESSENING POPULATION.

To the Editor of "The Provincial Medical Journal."

We are all anxious to possess the good things of this world, to make our existence on this planet enjoyable and happy. We are driven to this by the very intrinsic subtle force of our nature. The spirit of philanthropy impels us to share this happiness, and render it accessible to our fellow-beings (the fact of doing so constitutes the happiness of the philanthropist). Those so influenced, command the respect, and are entitled to the gratitude of mankind. These laudable intentions, this highmindedness, call for unlimited encomium, but the means sometimes adopted to attain the end in view are legitimately open to criticism. To lessen population by any other means, except by self denial, is reprehensible, physically and mentally wrong? antagonistic to every recognised code of ethics, repugnant to every fine feeling that actuates the human breast. Medical men know thoroughly well, no men better, that to thwart the vital functions, is liable to be followed by disastrous consequences. It is as well established as an axiom, that nature will not suffer with impunity. The sexual functions, when excited, require to be satisfied; gratification of this demand is peremptory, the non-compliance with this mystic process of nature and its developments, incontestably tends to interfere with the integrity of the brain. The violation of this *vis natura*, when persevered in leads, without fail, to insanity. Many an inmate of lunatic asylums may attribute his or her fall to indulgence in these proclivities. All right thinking medical men will endorse my views. All artificial means, no matter under what guise, used for preventing fecundation, or obviating this or that inconvenience, are unjustifiable. I was taken by surprise when I read the column, signed "Clericus," so much at variance with all preconceived ideas of the Scriptural fact.

I cannot realise how a properly accredited minister of religion could encourage such a depraved system, propound such a theory, and startle us with such an exposition of the text. It is universally believed (*simpliciter*) by all men of mental calibre that it was the physical act committed by Onan that was criminal. The editor has ably and exhaustively threshed out the subject in all its possible surroundings; but as a member of a profession which I respect, I add this contribution as a protest against the false philosophy which would lead those whom we are bound to direct to a state of things attended inevitably with deplorable results.

I maintain that when medical men, and others philosophically disposed, enunciate principles which are supposed to ameliorate the condition of, and raise their fellow-beings in, the social scale, they ought not to be of that class which, instead of tending to make the *honest man*, the man of noble mien, would have him go forth with nature *frustrated* stamped on his brow.—Yours truly,

W. F. FENTON, Physician and Surgeon.

Cligheen, December 17th, 1887.

Bibliographical Record.

BOOKS, PAMPHLETS, ETC., RECEIVED.

- An Analysis of Ninety-three Cases of Writer's Cramp and Impaired Writing Power. By G. V. Poore, M.D., etc. pp. 33. London: Adler & Son.
Clinical Lectures on Certain Conditions of the Hand and Arm, which interfere with the performance of professional acts, especially piano-playing. By G. V. Poore, M.D. pp. 8. London: British Medical Association, Strand.
Comments on the Report of the Committee on M. Pasteur's Treatment of Rabies and Hydrophobia. By Surgeon-General C. A. Gordon, M.D. London: Baillière, Tindall & Cox.
The Annual Report of the Gordon Hospital for Fistula and other Diseases of the Rectum.
Where Consumption is Bred in Manchester and Salford. By Arthur Sansome, M.D., M.A., F.R.S.
The Diseases of the Breast. By Thomas Bryant, F.R.C.S., with Thirteen Engravings and Chromo-Lithography. London: Cassell & Co.

PERIODICALS RECEIVED.

AMERICAN:—

1. The Journal of the American Medical Association.
2. The Therapeutic Gazette.
3. Medical Register (Philadelphia).
4. New York Medical Journal.
5. Medical Record (New York).
6. The Medical Bulletin (Philadelphia).
7. New England Medical Monthly.
8. Medical Times (Philadelphia).
9. The Polyclinic (Philadelphia).
10. The Analectic.
11. The Medical Standard (Chicago).
12. The St. Louis Medical and Surgical Journal.
13. The Denver Medical Journal.
14. Annals of Gynecology (Boston).
15. The Medical News.
16. The American Lancet.
17. The Medical and Surgical Reporter.
18. The American Druggist.
19. The Western Medical and Surgical Reporter.
20. The South Western Medical Gazette (Louisville).

BRITISH:—

21. The Philanthropist.
22. The Practitioner.
23. The Medical Chronicle.
24. The Medical Press and Circular.
25. The Journal of Microscopy and Natural Science.
26. The Indian Medical Gazette.
27. The Australasian Medical Gazette.
28. The Hospital Gazette.
29. The Journal of Rhinology.
30. The Birmingham Medical Review.
31. The Ophthalmic Review.
32. The Pharmaceutical Journal.
33. Public Opinion.
34. Health.
35. The Chemist and Druggist.
36. The British and Colonial Druggist.
37. The Australasian Journal of Pharmacy.
38. The Journalist.
39. Diet and Hygiene.

FRENCH:—

40. Journal de Medecine de Paris.
41. L'Union Medicale.
42. Le Progrès Medical.
43. Bulletin Général de Thérapeutique.
44. Gazette de Gynecologie.
45. Gazette Hebdomadaire des Sciences Medicales.
46. Journal de L'Ouest.
47. Journal du Nord.
48. L'Electrotherapie Journal d'electricité.

GERMAN:—

49. Centralblatt für Kinderheilkunde.
50. Centralblatt für Gynecologie.
51. Centralblatt für Chirurgie.
52. Illustrierte Monatschrift der Artzlichen Polytechnik.
53. Der Fortschritt.

ITALIAN:—

54. Lo Sperimentale.
55. Rivista Italiana.
56. Rivista Internazionali di Medicina.

PORTUGUESE:—

57. A Medicina Contemporanea.

RUSSIAN:—

58. Vrach.

SPANISH:—

59. Rivista Clinica de Barcelona.

The above journals have been regularly received. We shall feel obliged if editors of British and foreign journals will notify whether their journals have been sent.

Copies of Index for 1887 may be obtained at office, 10, Friar Lane, Leicester.

THE Provincial Medical Journal:

A MONTHLY REVIEW OF MEDICAL SCIENCE, LITERATURE, AND BIOGRAPHY.

VOL. VII.]

MARCH 1, 1888.

[No. 75.]

Our Portrait Gallery.

GEORGE GRANVILLE BANTOCK, M.D.,
F.R.C.S. Ed.

AMONGST the gynæcological specialists of the present day Dr. Granville Bantock holds a conspicuous position, emphasized by the fact that he has but recently filled the presidential chair of the British Gynæcological Society in succession to Mr. Lawson Tait. His career affords us another instance of what may be accomplished by perseverance and hard work. It also illustrates what has been often insisted upon by so many eminent leaders of the profession, that a few years of general practice is a useful training for those who desire to devote themselves to some special branch of medicine. Dr. Bantock was born at Dunrobin, Sutherlandshire, on October 10th, 1837, and was educated at the Parish School, Golspie, from whence he went to Edinburgh University in 1854. Too young to proceed to the degree at the end of four years, he usefully employed his time by acting as assistant at Newcastle-under-Lyme and Newport (Salop) for three years, and then returned to the University for two years more, and graduated in 1861.

Selecting Chester as the first field for work, he remained there for three and a half years, seeing all kinds of practice. Ambitious, and attracted by the lights of London, he went to town in 1865, and was fortunate in being elected as Surgeon to the London Surgical Home, where he performed his first ovariectomy and first perineal operation. In 1869 he was elected Physician for out-patients at the Samaritan Free Hospital; Surgeon to the same in 1877; and full Surgeon in 1878, on the retirement of Sir Spencer Wells. In the September number of the *Provincial Medical Journal*, 1887, we published from his pen, "A Year's Work at the Samaritan Hospital," which gave a

detailed account of the operations he had performed during the year. Dr. Bantock, like most of his countrymen, is tenacious of his views, and he has had on certain occasions to fight his own. He is known to be hostile to what we know by the name of Listerism, and like all men who do not believe in popular creeds, he has had to assert his views with a certain degree of vehemence and force, conditions necessary for minorities. At the present day he can look round with some complacency, as many of his predictions with regard to the popular creed have been fulfilled. His statistics stand unchallenged, and his operations performed without Listerian precautions rival those of the school he has had to contend with.

In his presidential address, entitled "Listerism: its Past, its Present, and its Future," delivered to the Gynæcological Society of Great Britain, he defended his own practice, and showed how by the aid of pure water he could obtain as successful results as any of those who confined themselves to Listerism pure. Up to that time he had had fifty consecutive cases of ovarian and parovarian operations without a death.

Dr. Bantock is an Honorary Fellow of the American Gynæcological Society, and of the Detroit Gynæcological Society; Corresponding Fellow of the Gynæcological Society of Boston; and an Honorary Member of the Canadian Medical Association.

During the year 1887 he made a tour in the United States and Canada, giving an address on "Abdominal Surgery" to the Canadian Medical Association, and performing a number of operations, hysterectomy and ovariectomy, at Chicago, Philadelphia, and New York.

Dr. Bantock has published a number of papers and reviews in the periodical medical literature of the day, and, in the *Transactions* of the Obstetrical Society of London are to be found many contributions from his pen.

Original Communications.

ON A NEW METHOD OF TREATING SKIN DISEASES LOCALLY.

BY H. VALENTINE KNAGGS, M.R.C.S., L.R.C.P.

IV.

In considering the structure of the skin, and its mode of development in the embryo, we are forced to admit that the pulmonary, alimentary, and urinary tracts are merely covered by prolongations inwards of the skin. These lining membranes have necessarily undergone various modifications and alterations in structure to fit them for the respective functions which they are called upon to perform. The human body is, so to speak, enclosed in one vast continuous sac, the cutaneous or external portion of which is called upon to help in much of the work performed by the internal portions. Respiration, digestion, excretion, and other vital processes are thereby indirectly promoted and aided. A healthy condition of the skin is very essential to the well-being of the economy. Chronic inflammatory cutaneous diseases, apart from the nervous strain and loss of proper rest, that the itching, burning, or smarting give rise to, should be looked upon in much the same light as would be a catarrh affecting the mucous membranes of the respiratory or digestive organs, or that of the kidneys. Inflammatory diseases of the skin are now generally recognised as colds or catarrhs affecting the cutaneous structures. "Eczematous eruptions," says Dr. Mc Call Anderson, "are analogous to inflammations of the mucous membranes—they constitute, in fact, catarrh of the skin." The sooner the irritation is alleviated, and the disease itself cured, the better. I have treated in recent years a considerable number of cases of eczema solely by the local application of suitably medicated emulsions. Although I have witnessed under their use the rapid subsidence and speedy cure of chronic and long-standing eczema, I have never yet seen any bad results ensue from such a practice.

With respect to the choice of a local application, we know that some persons' skins are intolerant of greasy substances, others of lotions or watery fluids. By the use of the emulsion we effect a compromise and apply the two together in a combined form, as a single preparation. In chronic inflammatory processes connected with the skin an oozing takes place. The affected surfaces are saturated or infiltrated with a serous fluid which is frequently laden with, or contaminated by, substances inimical to healing. By the application of the emulsified ointment or lotion, the water, holding in solution the soluble ingredients of the lotion, penetrates to a greater or less degree through the cuticle and serves to diminish the inflammatory action beneath. At the same time the finely subdivided and gum-encased oil particles are left on the surface, where they promote rest and effectually exclude the air. The natural healing of a healthy wound is very similar. A supply of plasma is thrown out from which the water is gradually evaporated. The coagulated fibrin remains behind in the form of a scab or crust under which a new cuticle is formed.

In chronic cutaneous eruptions, speaking generally, the cuticle is not removed. It is preferable, therefore, in applying these remedies to rub in the application until the watery constituents have become either absorbed or evaporated and the artificial film of oil and gum alone remains on the surface.

In acute cases it is best to paint the affected part with the cream or smear it over so that it may mix with the discharge and promote the formation of a scab. Eruptions that are covered by unhealthy crusts are appropriately treated by applying the remedy thickly over them and allowing time for the watery fluids to soak into their substance.

In August, 1885, I used the permanent emulsion for the first time in a case of what Mr. Hutchinson would term eczema-lupus. This disease was of many years' standing, and had extensively implicated the right side of the face. The affected part of the skin was covered by tuberculous crusts, and an unhealthy ichorous discharge was present. Numerous ointments and lotions, and temporary mixtures of the two, were tried in vain. As a last resort a combination of a *bismuth ointment, prepared with vaseline, and a boric acid lotion was used.*

Vaseline	1 ounce	Gum	Boric acid.....	16 grains
Bismuth trisnitate, 1 dram		acacia,	Water	1 ounce
Ft. unguentum.		160 grains.	Ft. lotio.	

The patient, an elderly lady, was directed to smear this application over the crusts several times a day, and was also told not to wash it off, but to apply one layer upon another until a thick covering had been formed. Under this treatment rapid improvement took place. The discharge ceased; the scabs became less brittle, and exhibited a tendency to peel at the edges, leaving healthy skin at the margins. At the end of about three weeks from the commencement of this method of treatment the whole crust came away. The entire surface beneath it was found to be sound and healthy. With the exception of a slight amount of scaliness, and a scar of considerable extent, the patient remained free from the complaint for nearly two years. A slight return of the eruption then manifested itself, and a further use of the remedy again produced a successful result. No further return of the disease has since occurred. This case is recorded at length to serve as a typical illustration of the good effects to be derived from so simple an application, even in lupus. A few cases of an analogous character have since come under my notice, and applications similarly medicated were applied with equally satisfactory results.

In a very bad case of *lupus exedens* an emulsion basis similarly medicated was tried. The greater part of the left ala of the nose and the tissues below the left eye had become deeply involved and destroyed. At first a perceptible amount of improvement took place. The part assumed a more healthy appearance, the discharge diminished in quantity, and a remarkable, although feeble, attempt at healing evidently took place. This treatment was continued for over two months. The disease eventually elapsed into its old condition again, and no permanent good resulted from the remedy. This case proved a most instructive one to me. It is seen that even in the worst forms of lupus an evident effort to take on a healthier action may be manifested under the action of a perfectly non-irritating application.

In another severe case of *lupus exedens* occurring in a youth, an emulsion consisting of a ten per cent. salicylic acid ointment blended with a boric acid lotion had a marked effect. The tissues on the back of the hand were deeply destroyed and covered with tuberculous deposits. This patient had suffered in this way for more than nine years, and had attended as an out-patient at almost every London hospital. According to his account he had been "scraped" on several occasions. This application, and the bismuth



Yours sincerely
Geo. Grantell Barber

formula were used separately on alternate days. Under the continued use of these for a fortnight the disease began to make considerable progress. At the end of a third week, when he was seen for the last time, the eruption was almost well. Whether the improvement was permanent or not I am unable to state positively, as the patient has not been seen again.

That extended experience of this form of treatment will prove that suitably medicated permanent emulsions are remarkably curative in this disease cannot be doubted. If the salicylic acid application be alternated with another of an unirritating character the good effect of the medication is much enhanced.

In my hands emulsions have proved so satisfactory a form of skin medication that I should scarcely know how to manage without them. I have found that, with some few exceptions, the most obstinate kinds of eczema will yield under their continued use. In fact, strange as such a statement may appear to many persons, the more incurable, apparently, the disease, or the more aged the sufferer, the more quickly does the emulsion effect a permanent change for the better. Broken chilblains and the eczematous eruptions that occur on the extremities from various local causes, are especially obstinate under ordinary local remedies. A relative of mine from the "Far East" suffered much from chronic eczema affecting the toes. The complaint was contracted in the jungle. He informed me that persons so affected, and who live in tropical climates, will even make long voyages into colder and more temperate latitudes in order to get well, and then, very often, have to return incompletely cured. The application of a bismuth emulsion speedily removed all traces of this complaint in a few days in the case of my relative. A number of similar cases, all of which were of an intractable type, although contracted in England, have since been treated in the same manner. In every instance a rapid and complete cure took place in the course of a few days, or at the outside a week or two. Amongst these I may mention the case of an individual who suffered for a number of years from eczema of the fingers, due to the constant handling of irritants. The itching ceased under the treatment, and the hands were soon free from the disease, although this patient remained all the time at his occupation.

One of the principle points which attracts notice with this treatment in cases of eczema is the immediate relief of itching and irritation. This takes place almost immediately after the remedy is applied. An elderly gentleman consulted me who had been for years afflicted with chronic eczema. He had not had a proper night's rest for many months past. The pruritus was so intense that the attendant scratching made the blood flow freely. The bismuth formula was ordered to be applied when the irritation was troublesome, with further directions that no textile dressings were to be used, and that the part was to be kept as dry as possible. The patient informed me subsequently that this was the only application out of a large number that he had tried which adequately relieved the distress and enabled him to sleep. At first one application daily was found sufficient, but afterwards a single application arrested the itching for a whole week. The disease is now practically well, but he still uses the remedy at intervals of about a fortnight to make certain of thoroughly eradicating the complaint.

Another gentleman suffered similarly from severe pruritus associated with chronic eczema. Two applications of the remedy permanently arrested the itching and cured the disease.

In a third case—a gentleman suffered from severe gouty eczema—there was scarcely a part of the body that was not affected by the disease. This individual had tried numberless methods of treatment with indifferent success. The emulsion treatment speedily and permanently cured the disease. A lady friend of this patient had also suffered greatly from eczema for five years, and had tried every available remedy, she was completely cured of her ailment in a few weeks by means of the emulsion.

I give these few instances as types of many other cases in which the emulsion treatment acted with uniform certainty. The troublesome pruritus of old people is rapidly cured under its use. The irritation of chronic urticaria was effectually arrested in seven cases in which the emulsion was tried. Crude pyroligneous acid in a thin and well-diluted emulsion will be found to act well in such cases, but other formulæ are equally effective. In chronic urticaria it is generally necessary to administer internally a suitable alkali which should be continued for some time in conjunction with the local remedies, until all fresh wheals and papules have ceased to make their appearance. In the eczema capitis or scald head that occurs in infants during dentition, the medication of the emulsion, in recent acute cases requires to be varied to suit each case individually. The bismuth formula certainly proves rapidly curative in chronic cases and especially in those that have resisted other forms of treatment. Where this formula has failed I have employed oxide of zinc with glycerine or salicylic acid as medicaments with good results. According to my experience the acute eczema of infancy is the only form of catarrhal eruption which does to any extent resist the action of these preparations. Why they should rapidly cure one case of this disease in an infant and fail to benefit another of an apparently similar character is one of those problems which at the present time I am certainly unable to solve satisfactorily.

Permanent emulsions have proved very effectual in many cases of psoriasis. This basis when suitably medicated is the best I have ever used in this complaint. After a variable time the application dries; effectually covers up the affected part; and curative drugs are retained in continual contact with the hypertrophied papillæ. Chrysarobin, trisnitrate of bismuth, or salicylic acid, if used as medicaments in quantities of from five to ten per cent. upwards, can be applied in this manner. The chrysarobin emulsion is a cleanly compound. It should be gently rubbed in for several minutes. Owing to its drying on as a film it prevents staining of linen or surrounding parts. One of the most satisfactory formulæ to use in psoriasis is constituted as follows:—

Paraffin molle	$\frac{1}{2}$ oz.	Gum	Boric acid ...	8 grains.
Zinc oxide	1 dram	acacia,	Glycerine ...	1 dram.
Pure liq. carbolic acid, M. i.		80 grains.	Aqua	$\frac{1}{2}$ to 1 oz.
Ft. unguentum.			Ft. lotio.	

Place the ointment in a warmed mortar. Incorporate with it the gum. Then add two drachms of hot water and finally the remainder of the water mixed with the ingredients of the lotion.

I may add, by the way, that the action of these remedies on domestic animals suffering from various eruptions is little short of magical. I have suggested this plan of treatment in several cases of the kind. The eczema so common to cats and dogs is generally removed by a few applications of the bismuth formula. Parasitic eruptions also can be cured with equal rapidity by an emulsion medicated with sulphur.

In conclusion, I would remark that if anyone is sceptical

as to the remarkable results to be obtained by this method of treating skin diseases, it is easy to put the matter to the test in some obstinate case of eczema. He will in all probability not have to look far to find one, for this complaint is prevalent enough in all conscience. If after that, he is still unconvinced, I am afraid he is beyond the reach of any argument of mine.

FROM GENERATION TO GENERATION: A PRELUDE TO THE STUDY OF HEREDITY.

By R. A. DOUGLAS LITHGOW, LL.D., M.R.C.P. ED., F.S.A.
F.R.S.L., ETC.

(Continued from page 63.)

Diseases of the Kidneys, etc.—That a predisposition to diseases of the kidneys, bladder, and generative organs, is hereditarily transmitted, and characterises certain families for generations, is a fact which cannot be denied; and if my arguments as to the influence of heredity in the diseases of the circulatory, nervous, and respiratory systems are of any avail, we shall have no difficulty in understanding why this is and must be so. For the human body being subject to the law of heredity in its every organ and tissue, it assuredly follows that what is true physiologically and psychologically, must, as a natural sequence, be true also pathologically. We are prone to talk of the constitution of an individual. What do we mean by the term, and what does it involve? A sound constitution has been defined as the harmonious development and maintenance of the tissues and organs of which the body is made up. Whence does it originate? From the union of a healthy sperm and germ cell in the maternal womb. To this same union I have already traced the source of heredity: so that every constitution has its foundation laid, and its deficiencies and potentialities developed and maintained in accordance with the law of heredity, to which they are alike subject from the time a germinal vesicle is produced by the fusion of the germ with the sperm cell. Irrespective of the *definite inherited forms of disease* which contribute to constitutional unsoundness, the latter condition may also be the result of defective or *deficient vitality*, which may be general or local. When general, this deficient vitality is frequently observed in "the children of parents one or both of whom are in advanced life, or whose vitality on one side or the other has been reduced by excesses, such as alcoholic or venereal. Exhausted vitality from prolonged disease, *e.g.*, phthisis or tertiary syphilis, affecting either parent, may determine the death of the offspring at an early period from mere failure of nutrition, or may cause it to succumb to acute disease not necessarily associated with any inherited tendency of a special kind." Deficient vitality may also be local, *i.e.*, affecting only certain tissues and organs, or involving certain systems, as the nervous, the respiratory, the vascular, generative, or digestive; and amongst those diseases which are the most assuredly and markedly hereditary, none are more so than those of a degenerative form, including structural heart diseases, atheromatous vessels, emphysema, certain diseases of kidney, etc. All these partake of the nature of premature senility of organ or tissue, consequent upon some inherent deficiency in their vitality. "Although the constitution of an individual begins with his life, it is nevertheless the resultant of the constitutional peculiarities of many antecedents. This being so, tendencies to disease may date far back in the pedigree, to be called forth from time to time by favouring circumstances." What we have practi-

cally to remember is, that in addition to such definite inherited forms of disease as congenital syphilis, gout, scrofula, tuberculosis, cancer, asthma, and several neuroses, the relative soundness or unsoundness of individual constitutions is also dependent upon a local or general defectiveness of vitality, which is hereditary, and which will tend to develop disease in the impaired organ or tissue. Constitutions are liable to be rendered unsound, not only by definite inherited forms of disease and defective vitality, but by the wear and tear of life in its environment. Here again we have the constitutional vigour so impaired, subsequently to birth, by pernicious surroundings, that constitutional diseases are thus engendered, and passed down as a legacy to be inherited in future generations, in the form of scrofula, rickets, phthisis, etc.¹

We thus see that there is no organ or tissue of the human body which is not subject to heredity in disease as in health: the fact being that, in one as in the other, like begets a predisposition to like, capable of being modified by variability, or even neutralised by marriage into a new stock, for a generation, but never lost. A predisposition to degenerative diseases of the kidney is therefore as much a fact as that scrofula or phthisis are the results of the development of a pre-existing disposition in the organs or tissues affected by them. The three degenerative diseases of the kidney known under the generic name of Bright's disease will afford an example. The first, or inflammatory form, may be acute or chronic, and usually affects the tubules; the second, or waxy, lardaceous, amyloid or albuminoid is degenerative, and originates usually in the vessels; whilst the third, the gouty or cirrhotic form, is also degenerative, and originates in the fibrous stroma. What has heredity to do with these conditions? Let us seek our reply in the etiological sources of each of these affections. The inflammatory affection is said to be caused by exposure to cold, and by scarlatinal and other blood-poisons: the latter I shall consider presently, when I come to deal with heredity as affecting the acute infectious diseases. With regard to exposure to cold, we have already seen that the catarrhal diathesis is universal, but may be, and is, differently distributed in different individuals. Let us suppose, for example, that a parent has in early life suffered from this inflammatory affection of the kidneys, however caused: however competent to discharge their functions afterwards, the kidneys during his life will bear the brand of what they have suffered—they will be *somehow* different from what they were originally. This parent has a child or children who have, in common with humanity, inherited the catarrhal diathesis, subject in his or their cases to the combined catarrhal predisposition of both father and mother. From what we have already seen of the action of heredity, is it too much to assume that one of the father's children will inherit a predisposition to the pathological taint in his father's kidneys, and on exposure to a similar cause will almost inevitably suffer from a similar affection? I trow not; but, unfortunately, I have no cases at my disposal to bear out my argument. At any rate, it is easy enough to adduce cases of like heredity in reference to other organs and tissues, and if so in these, why should the kidneys be excepted? I firmly believe that as every vestige of the human body is subject to heredity physiologically and psychologically, so it must be, and is, with regard to its pathology: for disease is but impaired function or degenerative change; and if, in health, every

¹ Dr. Douglas Powell.

cell, membrane, muscle, bone, and viscus—every element of man in his dynamism—is subject to the law of heredity, by a parity of reasoning, I cannot see why, if certain morbid conditions are universally recognised as hereditary, a predisposition to every morbid condition may not be traced to the same influence.

The waxy or amyloid disease of the kidneys is said to be caused by phthisis, syphilis, caries, profuse suppuration, and other exhausting conditions, and is often associated with waxy degeneration of other organs, especially the liver, spleen, and intestinal canal: in fact, it might be defined generally as a constitutional condition dependent upon the scrofulous diathesis. As in the foregoing, and for similar reasons, this condition is capable of being transmitted hereditarily, at least, so far as a predisposition to its development is concerned. The gouty or cirrhotic form of Bright's disease depends for its causation upon alcoholic intemperance, the poisons of gout and lead, and other conditions which are unknown. In the course of its development, hypertrophy of the heart, with sclerosis and degeneration of the vessels are frequently associated with it, inasmuch that Sir William Gull and Dr. Sutton regard the affection as only symptomatic of a constitutional condition characterised by hypertrophy of the walls of the small arteries, due to a fibroid growth in the external coat of the vessels. Dr. George Johnson, on the other hand, regards the hypertrophy as "a consequence of the obstruction which impure blood invariably meets with in the capillaries." Whichever view may be correct, I have certainly seen cases in which the cirrhotic form of kidney disease was associated with cirrhosis of the liver, sclerosis of the blood-vessels, mitral stenosis, and, curiously enough, with sclerosis of the posterior columns of spinal cord. There is, at least, much in favour of the belief that the so-called "gouty kidney" co-exists with a constitutional condition, however imperfectly understood, and that like all other constitutional conditions, it is capable of being transmitted, as a predisposition, hereditarily. I have chosen the three forms of Bright's disease as illustrative of my argument because in themselves they constitute the most important of the diseases of the kidney; but I might readily have included syphilitic, malignant, and tubercular disease, suppurative inflammation, acute and chronic atrophy, cystic, hydatid, and fatty disease, pyelitis, etc. Those to which I have referred are, however, I trust, sufficient to show that as in every other organ and tissue of the human body, the kidneys are similarly predisposed to disease, and that this predisposition is hereditarily transmissible.

Renal and vesical calculus—similar morbid conditions—are undoubtedly hereditary. I could adduce many striking instances of this fact, but the following will suffice:—The first case is mentioned by F. Hoffmann. The Lady of the Prince Moritz of Zeitz was afflicted with nephritis; she was delivered of a daughter, who, from the moment of her birth, suffered very great pains, especially when passing water. The child lived only three weeks. At the *post-mortem* examination there was found in the bladder a stone as large as the stone of a peach (*instar mali Persici*). Gaubius, as alluded to by Steinau, assisted at a lithotomy performed on a boy of ten years of age, whose father had twenty-five years before undergone the same operation. The father, upon seeing the stone taken from his son, assured them that it was quite like that taken from himself. Gaubius compared them; and found they were indeed like each other in every respect, except in size, the father's being somewhat larger than that of his son. There is also

the well-known case of the Perigordian philosopher, dear quaint old Montaigne, who suffered severely from stone in the bladder, which he had inherited from his father. Stahl also assures us that he never saw a person suffer from lithiasis, whose father or some other near relation had not been afflicted with this same complaint, or with gout.¹

The different maladies peculiar to women, according to the opinion of the most skilful observers, frequently occur hereditarily, or are transmitted as a predisposition to the same. Nothing is of more frequent occurrence, says Stahl, than to see all the different irregularities of the menses, pregnancy, puerperium, the milk, etc., that had taken place in the mother, appearing also in the daughter; and every observant physician must have frequently noticed this fact. The relative susceptibility of individuals to the syphilitic and gonorrhœal virus—to stricture, catarrhus vesicæ, enlarged prostate—all of which involve a hereditary element, might be here noticed, but I shall allude to some of these affections hereafter. I therefore, maintain, that in all diseases of the kidney and genito-urinary tract there is a pre-existing heritable disposition of tissue and organ, whether of late or early descent, and that this view is well supported by facts in every day practice, if they are only recognised and appreciated aright.

Diseases of the Chylo-poietic System.—The mere enumeration of these diseases would monopolise almost all the space at my disposal for their consideration. I shall, therefore, content myself with some brief general remarks as to how they are affected by heredity. If there is any truth in my previous statements regarding the diseases already considered, and if my arguments have anything to recommend them, it follows, by analogy—if I have established as a fact that pathological processes are subject to heredity because the physiological and psychological nature of man is undoubtedly inherited, although subject to individual modifications—that what is true of one system must be true of all, and that as every tissue and organ in the human body bears the brand of heredity in the discharge of their every function in health, so must they also in disease, which I regard as functional derangement or degenerative change in tissues or organs which have been inherited. Again I must guard myself from being misunderstood. I do not mean that the diseases of ancestors or parents must inevitably be transmitted to their children (although such cases occur, perhaps, more frequently than we wot of); but what I contend for is that the physiological and psychological natures of ancestors and parents being handed down to their children, with certain individual modifications, it must follow that the brands of disease upon, or the taints of disease within their tissues or organs, must be likewise transmitted as predispositions to the same. When considering the physiological and psychological aspects of heredity, in this series of papers, I think I proved without a doubt that there was no element of man either in his organism or in his dynamism that was not subject to the law of heredity; and if this is so it seems to me but a natural consequence that with his organic or dynamical peculiarities he should also transmit a predisposition to the weakness or deficiency of his tissues or organs produced by disease in himself, to become re-developed in his children under circumstances favourable for such development.

With regard, however, to the diseases of the stomach and intestines, of the pharynx and œsophagus, of the

¹ Dr. Steinau.

peritoneum, of the spleen and pancreas, if heredity and variability necessitate the fact that these organs differ from each other not only organically, but functionally in the cases of different individuals, and that in no two individuals are they precisely the same either in their organic potentialities or functional peculiarities, it assuredly follows that they are differently predisposed to organic and functional derangements and diseases, and it is only fair to assume that heredity and variability are also responsible for this fact. It is at least safe to affirm that all the diathetic diseases—tubercle, scrofula, cancer, syphilis, gout, *et hoc genus omne*—are markedly hereditary, and that every organ and tissue of the chylo-poietic viscera are subject to each and all of these diseases admits of no doubt. Of other morbid conditions of the chylo-poietic system which are frequently inherited I may mention helminthiasis, hæmorrhoids, dyspepsia, hernia, fœtor oris, and dropsy; to these might be added many kindred conditions, but those mentioned will suffice. With regard to helminthiasis it is a fact, as proved by daily experience, that the children of parents who are infected by intestinal worms (especially *ascaris vermicularis* and *ascaris lumbricoides*) are also attacked with these parasites, often at a very tender age, when they cannot have been caused by any noxious influences; and sometimes even from their very birth. Dr. Steinau says he had frequent opportunities in the Hospital for Diseased Children, in Berlin, to assure himself of the hereditary character of this complaint. The hereditariness of hæmorrhoids is of too frequent occurrence to render it necessary to enlarge upon it. Who has not witnessed dyspepsia, in its protean forms, handed down from parent to child, and been struck by the frequency a patient will say "My father (or mother) had a very weak stomach too?" Hernia has been known to have been inherited through many generations. Many competent writers, says Steinau, have cited cases to prove this; and Richter saw several children, whose fathers were ruptured, suffering from the same complaint, having in each case arisen without any external cause, and quite spontaneously. Speaking of dropsy, Rougemont, supported by the testimony of several credible writers, says that it is proved by numerous observations that the children of such parents as have died of dropsy became at a certain age also dropsical. Many cases have been noticed of dropsical women being delivered of dropsical children—particularly one case quoted by Hufeland, and observed by Olivier. Chronic fœtor oris, which does not appear to be produced by any visible local cause, is also often hereditary.¹ To these might be added abdominal cramp, flatulence, constipation, pyrosis, and many other allied conditions.

Regarding the diseases of the chylo-poietic system as a whole there is scarcely one of them to which heredity cannot be said to have predisposed. Of course the influences of life and circumstances have to be estimated in every case as factors in the production or development of disease; but I maintain that in almost every case there is a pre-existing disposition which has been inherited, and which acts as the source from which morbid processes spring, or as the foundation on which they are laid. To quote an illustration already given, why should several individuals exposed to the same noxious influence—say a chill—be so differently affected? One will have as a consequence an attack of influenza or bronchial catarrh, another sore-throat, another rheumatism, another bronchitis or pneumonia, another lumbago, and so on. Why are

some individuals so prone to attacks of erysipelas, biliousness, sick-headache, etc.? Because they differ from each other as individuals in power of resistance; because of pathological habit; but principally because of constitutional predisposition which, in nine cases out of ten, will be found to rest upon a basis of heredity. Their fathers or mothers may be found free from any such affection as the children respectively suffer from; but this is not enough to prove their non-hereditary origin. We must enlarge the cycle of heredity and inquire further back in the pedigree, and if this inquiry also gives a negative reply we must remember that hereditary diseases are somehow mysteriously related to each other, and may in many instances be found vicarious; thus it is possible that the father may suffer from hæmorrhoids, and the son from dropsy; or the first from gout and the latter from stone; but still in these cases the dropsy as well as the stone must be considered as hereditary.

Try as we may, there is no such thing as getting rid of heredity, for it is the inexorable law of our being. No force in Nature can be lost; and as whatever we *have* or *are* we owe to heredity, save the action of our environment, we must bow to the inevitable, and admit that as our physiological and psychological being is subject to the action and inter-action of this great law within us, so also we are more or less predisposed to the morbid processes which assail us during our lives, and that these predispositions we shall pass down to our children, however ignorant we may be of the fact, or however we fail to recognise or appreciate it. As the past slumbers in each one of us, so do the potentialities of the future—the welfare and commonwealth of our race!

(To be continued.)

OCCLUSION OF COMMON GALL DUCT, AND DIFFICULTIES IN DIAGNOSING CAUSE OF OBSTRUCTION.

By ANDREW SCOTT MYRTLE, M.D.

(Continued from page 52.)

CASE 7.—Mr. R—, æt. sixty-two, gentleman farmer, came to me with a letter from his ordinary adviser. History: "For years the patient has been suffering from dyspepsia of the most severe and varied character, the pain and sickness after eating solid food being so marked as to cause one to suspect ulcer of the stomach. These symptoms would gradually subside, to be replaced by the most violent frontal headache, which lasted from twenty-four to forty-eight hours, and this again was followed by bilious vomiting, accompanied with severe spasm of gall duct, followed by jaundice. Latterly he has been losing weight, has become very much depressed and enfeebled, and as he has not responded to any of the remedies prescribed, I have advised him to pay Harrogate a visit, and see what its waters can do for him under your advice." Ulceration of stomach, cancer of pylorus, cancer of liver, and gall stones had all in turns been supposed as the possible condition of this patient. After his arrival, for three days he improved in every respect—appetite, strength, and sleep—but at the end of the third day he fairly broke down; spasm of gall duct, vomiting, prostration, could retain neither food nor medicine; matter vomited passed from light yellow to coffee brown, and then became quite black; stools ditto. On examination I found the liver two and a half inches below ribs and left lobe especially full and tender on pressure; pulse 120; temperature 102°3°;

¹ Steinau.

complained of intense thirst and intolerable heat. I applied hot poultices to liver and stomach, abstinence from all food, giving nothing but ice; $\frac{1}{4}$ -grain morph., $\frac{1}{60}$ -grain atropia hypodermically. This put a stop to both pain and vomiting. I then ordered $\frac{1}{4}$ -grain morph. with $\frac{1}{2}$ -grain hyd. iod. vir. every four hours. His condition looked extremely grave, and I fed him on Brand's essence of chicken-peptonised, with iced champagne; hot water bags were kept over liver constantly. At my evening visit I thought he would be dead before morning; to my surprise he was better, and of his own accord had asked for and drank two half-pint glasses of hot sulphur-water. This had acted freely, bringing away a quantity of glutinous pitchy looking matter. I stopped the hyd. vir. All day he at intervals of from two to three hours passed the same kind of motions, to the relief of all his symptoms. He began to ask for strawberries and cream, and for two or three days he took little else. After that I put him on No. 2 Koumiss; this he enjoyed and drank freely of. Each morning he had his purge of sulphur water, and he gradually got well, or rather, I should say, resumed his usual condition as a dyspeptic. The grave symptoms in this case arose from long-standing biliary retention, involving chemical changes in the pent-up secretion, acting as a poison; at all events that is my solution of this singular case.

CASE 8.—Mrs. D—, æt. forty-four, dark complexion, went to Brighton to reside some two years before I saw her. All the time she remained there she never felt well, her appetite failed her, or was capricious, she felt feverish, out of sorts, and depressed, had steadily lost weight, was often so drowsy she could scarcely keep awake during the day, and at night she was fidgety and restless. Here I may remark that I have frequently observed the same symptoms develop in people of Mrs. D—'s temperament whenever they visit the seaside. Tongue foul, breath most offensive, sickness constant, skin jaundiced, slight hæmorrhage from nose, gums, and lower bowel; liver enlarged and tender; has had three attacks of jaundice, preceded by great pain above umbilicus. Was treated for gall-stones; none ever discovered. The symptoms were so like those of former case I jumped to the conclusion that it was identical. Put her on mercury (calomel) with a little opium for two days. On the morning of the third I ordered the sulphur water, warm, in full doses, and the result was a copious discharge for days (seven I think) of the same dark sticky pitch-like stuff. Here I had little difficulty to contend with; all the symptoms which had so long troubled her gradually disappeared, and the liver resumed its normal condition.

CASE 9.—Mrs. A—, æt. fifty-two, had for above twelve months been in failing health; during that time she had been more or less confined to bed, on account of the impossibility of her wearing ordinary clothes, as anything the least tight round the waist caused pain and sickness. The liver was easily mapped out, and its lower margin was three and a half inches below the ribs, the surface felt nodulated, or more correctly speaking, uneven; there had been frequent but slight bleedings from the nose and gums. She had been jaundiced several times but to no great extent; her mucous membrane had been more or less irritable, and there had been constant nausea, pain under right shoulder, and great acidity; she looked cachectic as well as anæmic; no fever, tongue flabby, irritable, white fur at back, urine loaded with uric acid crystals, stools light coloured and offensive. She was supposed to be suffering from malignant disease and occlusion of gall

duct. I confess I took the same view, and for weeks absolutely refrained from treatment. The patient at the end of two months was, I thought, rather better than worse, and the liver had certainly diminished perceptibly in bulk, and the nodules were on careful examination no longer felt. Then I determined to adopt a more active course, and prescribed at night pil. Plummer with Carlsbad salts following morning. At the end of a fortnight there were decided signs of improvement, bile appearing in fair quantity in the motions, less acidity and tenderness. Continued same treatment for a fortnight longer, when I put her on full doses of quinine, with the best results, convalescence. I had the satisfaction of telling her family that I had, at first, been completely at fault in my diagnosis, and that, instead of suffering from cancer, she had been the subject of chronic congestion. I should add that for weeks I employed a liver pad, saturated with nitro-hydrochloric acid lotion, almost constantly, and that I dieted the patient most strictly, allowing only the simplest forms of nourishment, and no stimulants whatever. This patient could not bear the smell of sulphur water.

CASE 10.—Mrs. G—, æt. seventy-five, began to complain of nausea and bitter taste in mouth, in September, 1886; this continued till October, when she was attacked with violent hepatic colic, great tenderness of right hypochondrium, anorexia, jaundice; urine full of bile, stools quite white. Notwithstanding all these grave symptoms the old lady would go about, attend to her domestic duties, and do just as she liked. The usual remedies were had recourse to, without any result. Every ten or twelve days she had a renewal of colic, pain in the liver, and increase of jaundice. This went on till end of January, 1887, without much loss of flesh, although she had to live almost entirely on milk and farinaceous foods. All this time the excreta were carefully examined, the stools never contained any concretion, and never showed a trace of biliary pigment; she was so stout that I could not ascertain the physical condition of the liver, and was utterly at sea as to the etiology of the case. I had given every medicine I could think of, tried every mineral water in turn, and at the end of the fourth month the patient was the same as when I first saw her. One thing I had not tried was bed, so there I put her and kept her, having no hope of recovery; the room was kept at the temperature of 60° Fah.; one of the most painful symptoms in this case was flatulence, and for this I prescribed a pill, with pepsin porci, manganesii sulph., each 2 grs.; ext. nuc. vom., gr. $\frac{1}{4}$, one thrice a day; in about six weeks the motions began to show some bile; this gradually increased, the skin and urine cleared, and about the middle of April the patient was perfectly well, and going out daily; this was evidently a case of chronic catarrh, and considering the age and obstinacy of the subject, a very singular one too. She maintained that the pills cured her, I that it was the uniform temperature and bed.

CASE 11.—Mr. S—, æt. sixty, when perfectly well in July, 1886, was caught in a thunder shower, drenched to the skin, and remained for two hours in his wet clothes. Next day got up, feeling well, ate usual breakfast; two hours after was seized with intense pain in gall duct, then followed cramp of stomach, which was only relieved by an emetic of mustard and hot water. In twelve hours jaundice—the liver becoming gradually more and more congested and painful, with high fever, intense thirst, and great prostration; calomel and opium, with ipec., were given; hot stupes over liver;

the motions became as white as milk, gallstones were suspected and carefully looked for, but none found, as the liver was distinctly felt considerably enlarged and tender, smart purging was enforced, with the greatest benefit, and in a week Mr. S. was doing work. Four weeks after first attack he had a second, clearly brought on by his having, whilst hungry and exhausted, partaken of unwholesome food, all the symptoms returned exactly in the same order, but with increased force; two doses of calomel of three grains gave rise to foetor, spongy gums and slight salivation; purging again was had recourse to, and the more he was purged the stronger and better he felt; for a week the stools remained quite white, the urine like porter, then gradually things came right. I have brought this case as a contrast to the preceding one, it being as good an example of acute catarrh as the other was of chronic.

I might multiply cases easily, but shall end this paper by one or two practical remarks on certain premonitory signs of liver disorder. First, I have observed an almost constant metallic taste, and that with this coppery taste, they have very commonly noticed that their linen was dyed orange colour by their urine. Second, that a common sensation was an unnatural craving for food, when there should have been no such desire shortly after a meal, this was so intense it amounted to gnawing, and must be satisfied. Third, everyone knows how the temper is affected by the state of the liver, but the mental faculty, which is most inconvenienced is the memory, as regards matters, important and trivial. The last symptom I shall name is a sense of weariness and weakness in the muscles of the lower extremities, they feel quite unequal to the most moderate work, and after it, ache as if they had been over-strained the day before. As regards treatment I pin my faith to mercurials, saline purgatives, diet and warmth. Of all purgatives I prefer natural mineral waters, and whilst admitting the power and value of many of the foreign springs, after much experience of their use, I can, with perfect good faith, affirm that the strong sulphurous springs and baths of Harrogate are administered in the great majority of functional disorders of the liver and digestive organs, with quite as much success and lasting benefit as are those of any country.

THE GENERAL PRACTICAL USES OF ELECTRICITY IN MEDICINE AND SURGERY.

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(Continued from page 57.)

Electrolysis.—The power which electricity possesses of splitting up all chemical compounds into their constituent elements, is destined to play a most important part in the practice of surgery. There is no destructive agent employed by the surgeon at the same time so potent and so entirely under his control. It can be applied to narrow passages of the body, and to other parts difficult of access, in a way and in cases that it would be impossible to apply any other agent. It is a more effectual and elegant means of applying caustic than any other we possess. It can be most accurately localized at the part it is wished to affect. The amount used, and the extent of tissue to be destroyed, can be regulated to a nicety; and its action can be commenced and arrested at any moment at the will of the operator. The

general practical uses of electrolysis are so important and numerous that the subject deserves separate treatment. I hope in a subsequent paper to explain the theory of, and give the details of the mode of carrying out, electrolysis, in some of the affections in which it is most useful. Among others it is used in the treatment of aneurysm, nævi, the removal of superfluous hair from the face, in-growing eyelashes, hairy moles and warts, port-wine marks, scars, strictures of all sorts—in the urethra, rectum, or œsophagus; obstructed lachrymal ducts and the Eustachian tube, stenosis of the os uteri, and many of the other diseases of women, as dysmenorrhœa and fibroid tumours, and in most of them it is more effectual than any means hitherto adopted.

Galvano-Cautery.—This is another mode of employing electricity, which is different from any of those I have already mentioned. In galvano-cautery we use the power which electricity possesses of heating metal, so that it can be used as an actual cautery, but in ways in which no other form of actual cautery can be used. The battery, also, which is required for this purpose, is different to the batteries used for galvanism, Faradism, or electrolysis. In the galvano-cautery battery there are usually only two, four, or six cells, but the surface of the elements are as large, and placed as closely together, without touching, as it is possible to make them. This is done for the purpose of reducing the internal resistance. Outside the battery the circuit is completed through the metal part of the instrument it is wished to heat. At this point the current meets with a comparatively high resistance, and the metal is heated to the required intensity. If the current is used too strong the metal may be fused.

The galvanic has several advantages over other forms of cautery. The instrument to be used can be introduced into the cavity of an organ, or along a passage leading to a diseased part, before it is made hot; if a wire loop is to be used it can be adjusted round a growth or other structure to be removed, deliberately and carefully, before the circuit is closed. The heat can be regulated and its action commenced and arrested at the will of the operator. These details are under his control more thoroughly and completely than with any other form of cautery known to surgery. If the cauter is kept at a dull, red heat, it acts as a styptic, and no bleeding need accompany an operation performed by its means; and there is a singular freedom from pain after the use of the galvano-cautery as compared to cases in which the knife or an ordinary *écraseur* are used. The process is antiseptic, and the eschar which covers the wound protects it and renders it less liable to purulent infection.

The disadvantages of the galvano-cautery are that the batteries and apparatus are expensive, and require frequent attention; an assistant possessed of special knowledge and skill is almost a necessity; whereas with the actual cautery or Paquelin's thermo-cautery the help of any intelligent individual is sufficient. When electrolysis can be used instead of the galvano-cautery, the objectional smell of burnt animal tissue can be avoided, which is inseparably connected with the use of the latter. I may here take the opportunity for pointing out that electrolysis and galvano-cautery are two entirely different things, and require entirely different batteries and apparatus. Electrolysis destroys by direct chemical decomposition, and there is no actual burning; galvano-cautery destroys by actual heat. It is very common for these two applications of electricity to be confounded together, and spoken of as acting in the same way. Galvano-cautery is most useful in removing pendulous growths such

as pedunculated tumours, polypi, and piles; in the removal of the tongue, penis and cervix uteri, and in other affections, especially those of the female genital organs.¹

The Electric Bath.—Both the continuous and interrupted current are used in treatment in the form of an electric bath. The bath should be composed of some non-conducting substance, such as porcelain or wood. In giving a general electric bath, that is intended to influence the whole system, a large copper plate is placed at the head and another at the foot, and these plates are connected respectively to either pole of the battery. The bath is filled with water, about the temperature of 104° Fahr., to such a depth as to rise above the top of the plates. The patient's feet may be placed against the plate at the foot of the bath, but the neck and shoulders should be protected from the other plate by a wooden frame, across which is stretched broad pieces of webbing. When it is required to apply the current locally, as through both hips, smaller copper plates are used, and one placed on each side of the bath at a level with the hips. For the galvanic current a bath made of copper is sometimes used. The bath itself is then connected with one pole of the battery, and a movable electrode, attached to the other pole, is applied to the part of the patient it is wished to treat. The human body immersed in water is a better conductor of electricity than the water itself, and the current passes through that part of the body which is directly between the two poles. If salt or an acid is added to the water, then the water becomes the better conductor, and the current will pass through it entirely, and avoid the patient. General galvanic and Faradic baths are used in constitutional states of the system, such as debility after long illness, or when produced by any other cause. The Faradic bath is usually in these states found the most useful. The galvanic bath is particularly useful in chronic rheumatic arthritis, in gonorrhoeal rheumatism, and in general lead poisoning. We have also found it of great service in the treatment of lateral sclerosis. In chronic rheumatic arthritis its beneficial effects can be greatly increased by a judicious employment of massage after each bath. Several patients with general rheumatoid arthritis have been treated by the author with marked improvement. The thickening around the small joints has decreased, and the patients enabled to walk and use their hands in a much better way than before the treatment commenced. They have not been thoroughly cured, but have been benefited to a greater degree than by any other form of treatment. When one joint such as the hip or shoulder has been chronically affected with rheumatism, its treatment by the galvanic bath, followed by passive movement, offers the best chance of relief. The baths may be given every other day, and should last from ten to twenty minutes.

Electro-magnets.—Electro-magnets are used for removing pieces of steel from the eye. The magnet consists of a pointed piece of soft iron or steel, around which is a coil of wire. A current from one or two galvanic cells is allowed to pass through the coil, and during its passage the piece of pointed steel becomes a magnet. The strength of the magnet depends upon the length of wire which is used to form the coil. Very strong magnets are produced in this way, and have also been found useful in removing needles and pieces of steel or iron from other parts of the body as well as from the eye. The presence of a needle or piece of

steel in the tissues can often be determined by the use of another needle that has been magnetised. The magnetised needle is suspended from its middle by a piece of cotton and moved slowly over the suspected part, and when it is brought near to the hidden piece of metal it dips, and will often indicate very accurately the position of the object that is being sought for. It can then be cut down upon, and if not too tightly fixed can be removed by the electro-magnet or by forceps. If the embedded needle or piece of steel is fixed too tightly to be removed in this way, a very ingenious device has been described by Mr. Littlewood.¹ The offending piece of metal is connected with the negative pole of a galvanic battery, an electrode connected with the positive pole is placed on some other part of the body, and a strong current allowed to flow for some minutes; electrolysis takes place around the fixed needle, and in a short time it becomes so loosened that it can be easily removed. To detect the presence of a bullet an electric probe has been used. The probe consists of two parallel rods of metal insulated from each other up to their tips. Included in the circuit is an electric bell. When the probe touches any hidden pieces of metal in such a way that the ends of both the insulated rods rest upon it, the circuit is completed and the bell rings. This probe has often been found useful in military surgery.

Electric Light.—Great advances have lately been made in the employment of electricity for the purpose of lighting up the cavities of the human body, and for facilitating operations in these cavities. No other form of light can be held at all times in such a position as to prevent it casting a shadow, or in fact upside down. A small electric light can be held in the mouth during the operation for cleft palate. It can be introduced into the rectum or vagina when held open by a speculum; and if necessary the interior of the uterus, after dilatation of the os, can be lighted up, and by this means the internal surface examined. The heat evolved is very trifling, and not sufficient to cause inconvenience. The lamp is mounted on a handle possessed of binding screws, by which it can be attached to a battery; and concealed in the handle is a rheostat, by which the intensity of the light can be regulated by a sliding button. By means of the button the circuit can also be made and broken, and thus the lamp rendered incandescent or extinguished. For examining the larynx, a mirror can be fixed so as to project over the end of the lamp, by which the rays can be reflected to the vocal cords. Means have also been devised for attaching small electric lamps to aural, nasal, or vaginal specula. In the *British Medical Journal* for December 3rd, 1887, p. 1211, a case is recorded in which the author assisted Mr. R. W. Parker in the removal of a tumour from the female bladder by galvano-cautery, the bladder being illuminated by the electric light. A supra-pubic opening was made into the bladder, through which the light could be introduced, and by its means the interior of the bladder was thoroughly lighted up; the position and attachment of the tumour was plainly seen, and the wire from the galvanic écraseur, which was introduced through the urethra, was accurately adjusted around the base of the tumour before it was made hot. The removal of the tumour was effected without the loss of a drop of blood, and the seared scar on the floor of the bladder could be well seen and examined; and several suspicious-looking points were again burnt with the galvano-cautery. The girl made a complete recovery. Recently a new electric cystoscope has been introduced from

¹ Vide "Handbook of Gynæcological Operations," by Alban G. Doran. J. and A. Churchill, 1887, Chapt. v.

¹ *Lancet*, Aug. 27, 1887.

Vienna, by which the male bladder can be effectively illuminated. A description of the instrument is to be found in the *British Medical Journal* for February 4th, p. 240. An independent battery, composed of a few large cells, is required for the use of any of these small electric lamps; and it is necessary, for the purpose of regulating the light, either to have a rheostat connected with the battery, or in some way inserted into the handle which carries the lamp.

Space does not permit me to dwell upon several minor uses to which electricity has been put as a handmaid to medicine and surgery; but from what has already been written it might appear that nearly every complaint can be cured or treated by this agent. Such is not the case. It will be found that certain complaints can only be relieved or cured by certain forms of electricity or the application of electricity in certain ways, and that if employed in other ways or in other forms, it only does not cure the affections for which it is used, but in some instances makes them worse. This brings me to another subject.

The danger of the Indiscriminate Use of Electricity in the Treatment of Disease.—For any benefit to be derived from the use of electricity, it must be used intelligently and appropriately for the affection for which it is prescribed. Duchenne was the first to point out, that to obtain any good results it must be applied locally, *i.e.* to the part it is required to influence. The tendency of all electrical currents is to take the shortest route possible to complete the circuit, always, of course, choosing the road that offers the least resistance. In the treatment of incontinence of urine, if one electrode be placed on the lower dorsal spine and the other above the pubes, the sphincter vesicæ is almost completely without the circuit, and receives very little direct influence. I have known electricity so applied in the case of females from feelings of delicacy, when the sphincter was, no doubt, at fault. If the current is not applied directly to the part affected, it is best to dispense with the use of electricity altogether. To produce an effect upon an organ, the more the current is localised the greater is the influence exerted. A weak and therefore often painless current can be used if applied locally, but if not so applied a much stronger current would be required to produce the same effect, and one perhaps not able to be borne without an anæsthetic. Many of the good results of electricity have been unattained and entirely disbelieved in because the current has been passed through the body in a haphazard way, often with the patient only holding the handles of some kind of electrical machine, which has produced most uncomfortable sensations and sometimes pain, with very little appreciable effect upon the organ it was wished to influence, and which possibly was situated in some remote part of the body. That is one of the reasons why the faradic machines, as often employed, and battery belts (even if they possessed any virtue) are so totally useless. It is impossible to influence the bladder by passing a current from one hand to the other, or even round the loins. It is also impossible to treat amenorrhœa by electricity by placing a belt round the body above the pelvis. Golding Bird, who, in his lectures,¹ says, "In electricity we possess the only really direct emmenagogue with which the experience of our profession has furnished us," excited the uterus to action by discharging Leyden jars through the pelvis. The currents we at present employ are of much

less tension, and not accompanied by the unpleasant shock inseparable from the use of the Leyden jar, but they are of very little benefit unless applied direct to the uterus, and to treat amenorrhœa by electricity in any other way, is a farce. Electricity does not act as an emmenagogue when applied indiscriminately to the general surface of the body. It may, in this way, sometimes relieve such an affection simply by the improvement of the general health, but not from any direct influence it would have on the uterus. The absurd "electrical appliances" and "electropathic belts" so extensively advertised for "ladies ailments" cannot be too strongly denounced by the profession, as they are a great imposition upon an ignorant public. If it were possible to pass a weak current of electricity through the body, or any part of the body, for an indefinite time, no doubt great tissue-changes would take place. It would be impossible for such a powerful agent—one capable of splitting up all chemical compounds—to be passed through the body without causing great changes. But the skin offers such a resistance to the passage of electricity, that the body may almost be said to be insulated. No weak current, such as is produced by these battery-belts, could pass through the skin. If one pole from the battery-belt be applied to the body, and a galvanometer introduced into the circuit between the body and the other pole, no deflection of the needle can be detected. If the current from these appliances were strong enough to overcome the resistance of the skin, sloughs would, in a short time, be produced at the points of application of the electrodes, a sore first appearing at the point of application of the negative pole. The same objection holds good with regard to the electric brushes; no battery that they can contain could produce a current strong enough to penetrate the skin of the scalp.

I see a number of patients who have been deceived and deprived of their money by purchasing electric belts, and all kinds of articles of dress supposed to possess electrical virtues, and these articles are sold at a most extravagant price. One man had given seventy-two shillings for an electric corset for his wife. I am often asked if there is any healing power in them or not, and if not, why are they allowed to be so extensively advertised? The answer is, because there is no one who has the power to prevent it. But the medical profession might do a great service to the public at large, and prevent an enormous amount of money being uselessly wasted if they would set their faces at once against this species of imposture, and explain to their patients the utter inutility of all electropathic belts, corsets, hair and tooth brushes, etc., etc. There are several kinds of electrical appliances of this description, one being a collection of bits of magnetised iron, sewn in between two layers of flannel, and another possessing one or more hermetically sealed galvanic cells, also in some manner attached to the belt. In the first place it has not been proved that magnets have any influence whatever on the human body when brought within the field of their attraction. Professor McKendrick, of Glasgow, in his address before the British Association for the Advancement of Science in 1883, said that "all attempts to influence the living body by magnets had no rational basis. He had tested this question by powerful electro-magnets, and had not been able to detect that they had the slightest influence on any vital phenomena." It is also reported that Professor Charcôt, at Salpêtrière, has placed the heads of patients between the opposite poles of the most powerful magnets that can be

¹ "Lectures on Electricity and Galvanism," delivered before the Royal College of Physicians of London, by Golding Bird, A.M., M.D., 1847.

made, without in any way influencing them. These appliances, containing pieces of magnetised iron, will of course easily influence a magnet when moved in its neighbourhood. And this power of influencing a magnet is generally demonstrated by the seller of this class of goods as an evidence of their power, and of the force they are likely to exercise on the human body. Of the appliances which contain concealed in them one or two small cells, usually the chloride of silver cells, the current which is produced will influence a galvanometer, if directly applied to one, but have no effect whatever on a galvanometer, if the resistance of the human body is interposed. The electromotive force of these cells is usually less than a volt, and the internal resistance high. If the resistance of the human body be taken at 1000 ohms. (a low estimate according to some authorities), it would require at least two cells to be applied, under the most favourable circumstances, to deflect the needle of a galvanometer one milliampère; the lowest measurement used in medical electricity, and not in itself capable of doing any good. One volt is not sufficient to accomplish the electrolysis of water, it cannot overcome the chemical affinity by which oxygen and hydrogen are in this compound held together. Professor Silvanus Thompson, not a medical man, but the Professor of Experimental Physics at University College, Bristol, thus speaks of the misapplication of electricity to medicine, "It is not out of place to enter an earnest caution on this head against the numerous quack doctors who deceive the unwary with magnetic and galvanic 'appliances.' In many cases these much-advertised shams have done incalculable harm; in the very few cases where some fancied good has accrued, the curative agent is probably not magnetism, but flannel."

In a recent number of the *Lancet*, January 7th, 1888, p. 35, "public attention is called to the vendors of 'bogus electrical belts' and other worthless appliances, constructed with the ostensible object of employing electricity as a curative agent." It gives the following description taken from the *Electrical Review* of two of these contrivances, "First we have a specimen of a galvanic generator, which is made thus: a small oval frame, of a bituminous nature, contains a similarly shaped but smaller zinc plate, ornamented in relief with 'lightning flashes.' Placed on this is a copper disc of similar shape, without any separating medium whatever between them. The combination is perfectly dry, and we need scarcely say that the apparatus sent to us is absolutely useless. The second is a magnetic appliance, which may be a so-called chest protector or anything else. Sewn up in a semi-circular piece of silk we find twelve feebly-magnetised pieces of crinoline steel, and this is all. Yet the price of the article is said to be thirty-five shillings."

I cannot too strongly call upon the profession to discountenance, in every possible way, the sham electrical appliances thus exposed by the *Lancet*. How can the public know unless the profession teaches them? If the profession is silent in denouncing such a gigantic abuse, as it has now become; can the public otherwise but think that the profession believes that these appliances do possess some virtue, otherwise they would not allow such a fraud to continue?

There is no way of applying electricity for curative purposes except by applying it locally and intelligently for the particular affection it is intended to relieve. Its application should not pass out of skilled hands. If, in certain

cases, a medical man should, after instructing a nurse, allow her to apply it, as in a case of infantile paralysis, which requires the treatment every day for months, he should still hold himself responsible for the treatment, and from time to time see that it is being carried out properly. There are so many points at which electrical treatment may break down, that it is impossible to prescribe it for the public for self-application, without bringing the whole method into disrepute. In these cases of infantile paralysis, to which I have alluded, where parents are seldom able to afford the expense of the continual application of electricity by a qualified man, I have found the most absurd mistakes occur, even when a nurse has been daily instructed in the mode of application. Parents have complained that they see little improvement in their children, and on examining the battery, it is found that there is no current generated; possibly there has been no current passing for weeks, but the nurse has been diligently rubbing the leg daily with the electrodes attached to the battery. At another time, the nurse is asked to go through her usual performance, to show how she does it, and it is found that she has been diligently rubbing the inside of the leg from the time she was first instructed, when the region of the perone muscles and tibialis anticus had been particularly pointed out. Many of these mistakes occur with adults. They mix up the positive and negative poles, or, when electricity is advised for some abdominal complaint, they buy a magneto-electro machine, hold the two handles, and allow a very unpleasant current to pass from one arm to the other, the rest of the body being left almost completely out of the circuit. As no beneficial result follows, they lose their faith in electricity.

There are some of its applications which certainly ought never to pass out of the hands of legally qualified medical men. Instruction in the application of electricity, and schools for massage and electricity, are now advertised weekly. Men and women, without any qualification whatever, are instructed to become skilled medical electricians, and given certificates. It is impossible to blind our eyes to the fact that the creation of a new class of certified, but medically unqualified electricians opens the door for abuses, and exposes the public to a new, or increased danger of harmful and pernicious quackery. It is true that medical men cannot afford the time, or perform the drudgery required for the daily application of electricity, but it would be safer, if each medical man understood the mode of application, that he should instruct some relative or nurse of the patient to apply it in any particular case, rather than educate a new class of purely irresponsible electricians, who would have no sufficient general knowledge to guide them aright, no restraining professional responsibility, and a constantly present inducement to recommend electrical treatment, in and out of season, and for all sorts and conditions of diseases, whether such treatment would be suitable or the reverse.

For the purely surgical applications of electricity, a technical knowledge of the subject, and an intimate acquaintance with the manner of using the different forms of batteries is the more essential. The use of electricity in gynaecological practice has lately excited a considerable amount of attention, in consequence of the discussions which have arisen concerning Dr. Apostoli's electrical treatment of uterine fibroids. I know, from the number of applications I have had from members of the profession, asking for details of the operation, the best batteries to use, etc., etc., that an indiscriminate application of this remedy is being made by men, without

¹ "Elementary Lessons on Electricity and Magnetism," by Silvanus P. Thompson. Macmillan & Co., London, 1883. p. 189.

the slightest previous knowledge of electricity. The difficulties and dangers connected with the treatment of uterine diseases by electricity are as numerous, though fortunately, perhaps, not so dangerous, as those connected with abdominal surgery. In the hands of some three or four surgeons the death rate, from abdominal section, is very low; but the entire death rate is high enough to make the profession anxious to find some alternative mode of treatment. If abdominal surgery were as universally practised as electrical treatment promises to be, the death rate would be appalling. The many points at which accidents may occur, and mistakes be made in electrical treatment, greatly outnumber the chances of failure in abdominal section, as the batteries and apparatus used in the former are so complicated. The use of the wrong pole in electrical treatment may be followed by most disastrous results; and the chances of the wrong pole being used are very numerous, sometimes even escaping the vigilance of the most experienced. The commutator of the battery may have been arranged wrongly by the instrument maker; the galvanometer may have been inserted on the wrong side of the circuit; the current may have to be arrested during an operation, and the commutator reversed by accident through the negligence or ignorance of an assistant. One operation may have required the use of the positive pole, and the next of the negative, and the necessary alterations in the battery have escaped notice. All these accidents have occurred within the knowledge of the author. I write with a sense of the strongest responsibility when I warn the profession against the indiscriminate use of electricity, and its indiscriminate use by those who have not a thorough knowledge of its action, and of the proper way of applying it, and of the construction of batteries. I have seen part of the mucous membrane of the urethra torn off and followed by profuse hæmorrhage by the use of the positive pole in the treatment of stricture. I know of a case where the patient suffered from such extreme collapse after a similar operation, that the surgeon for a time was fearful as to the result. The collapse was produced, either from the current being used too strong, or when strong, suddenly broken. I have been upbraided by a surgeon for advocating the treatment of stricture of the urethra by electrolysis, because in two cases he had set up most intractable cystitis by not cutting off the current after his electrode had passed the stricture, but by passing it on and electrolysing the coats of the bladder; and yet, when properly performed, electrolysis is the best mode of treating stricture. I have seen a patient disfigured for life by the too energetic use of the wrong pole, in treating a hairy mole on the face. In another case, an abscess or slough was produced in the upper part of the pharynx, accompanied by the most intolerable earache, by the use of the wrong pole in an attempt to electrolyse the Eustachian tube. Most profound collapse has been caused by an assistant uncoupling one of the electrodes after the electrolysis of a uterine fibroid, and before the current had been gradually reduced in strength. Very painful and disagreeable shocks have been produced when treating the same affection, by the battery having been sent home by the instrument maker with the zinc of one couple of elements placed in the wrong cell; and in another instance, by the battery being sent home with the fluid omitted from one cell. A case has been published where no doubt the woman's life was in jeopardy by the sloughing of a tumour produced by the use of a too strong current. I mentioned in my paper, read at Dublin, the difficulties, though not

serious, which followed the use of the wrong pole in the treatment of lachrymal obstruction. I could greatly extend this list of the dangers and difficulties connected with electrical treatment, but I have said enough to show that it should not be undertaken without a thorough knowledge of the apparatus to be used, and the mode of using it.

Objections have been brought forward to making a specialty of the practice of, or treatment by, electricity. It has been said that electricity is only a therapeutic agent, which is prescribed in certain cases by the physician or surgeon in the same way as any other suitable remedy might be ordered. That it would be just as reasonable to appoint an administrator of quinine, or any other individual drug, as an administrator of electricity. That every physician and surgeon is supposed to understand the therapeutical uses of electricity, and to be able to administer it, but that some individual is appointed to administer it for him, because he has not time to administer it himself. That the administrator should exercise no discretion as to the form of electricity to be employed, and the manner it should be administered, but should simply carry out the prescription as the dispenser does in the matter of drugs.

All common sense men will at once see that this contention is absurd. The technical knowledge required, involving one entire branch of physical science; the number and complicity of the apparatus used; the experience and dexterity necessary for their efficient employment, and the numerous practical details connected with the different methods, necessitate that this special branch of medical practice should be studied and advanced by professional men who devote themselves to its practice. And above all to rescue this branch of medicine from the hands of charlatans and quacks who have thriven on it for so long, it is necessary that it should be given into the hands of those only who have had a thorough previous training in medicine and surgery, and who can be implicitly trusted by their professional brethren. The prejudice against electricity will gradually disappear if it is never prescribed for cases that can be better treated by other means, but there are so many complaints for which electricity is the most useful curative agent, that it is quite necessary that every medical practitioner should have a general knowledge of its uses, and the varied ways in which it can be employed.

SACCHARINE.

BY ALFRED J. H. CRESPI.

IN Sir Henry Roscoe's masterly review of Chemistry at Manchester, a passage that struck many of his readers with surprise was the one in which he spoke of saccharine, the curious sweetening agent, 250, or it is now said, 300 times as sweet as ordinary cane sugar. Most people knew that the progress of chemical science has of late years been rapid beyond all precedent, and that coal-tar had been the mine from which the modern chemist has obtained colours, scents, and flavours, that had almost revolutionised the arts, and increased the elegancies and comforts of life. But few people knew that the ardent chemist could almost see a time when many valuable adjuncts to human food would be built up in the laboratory, and in any quantity required. There is a great difference between analysing a food and building it up from its very foundation, and while everyone knew that the chemist was able to take to pieces most of the foods in common use and find out their com-

ponent parts, it was not as commonly known that it was becoming possible to take the different ingredients, put them together, and manufacture in the laboratory a something indistinguishable from the finished product of nature's own providing. The triumphs of analytical chemistry were complete before those of synthetical chemistry filled the eager student of science with hope, and here it is that the greatest and most brilliant promise seems to be awaiting him. Is it going too far to prophesy that, judging from what has been done, remembering, too, that the goal of yesterday is reached to-day and left far behind next week, it will be possible and easy, too, in our own day, to manufacture wholesale many of those vegetable foods that have become necessities of life to us? There seems hardly any limit to what chemistry may do, and a young man of real genius and fixity of purpose, who wanted a field vast enough for all his energies and for the longest life, would find none to compare with chemical science. There labour cannot be wasted. A man may immortalise himself by carefully examining what other people throw away, and there is nothing so commonplace, so familiar, that a careful examination of it may not lead to great discoveries pregnant with wonders. Every year fresh plants are being brought to England, fresh fruits and vegetable products are made known, and it requires no very deep knowledge of what has been done, and of what is now taking place to justify the assertion that before the present century has run its course chemistry will have enriched the world with products that for usefulness, potency, and cheapness, will transcend nearly everything that is at the present time within the reach and at the command of man.

The chemist has long possessed chemical agents whose potency might well fill the mind with awe: for instance, one grain of the ammoniacal hypo-sulphite of silver will make 32,000 grains of water intensely sweet, while one grain of strychnine will make one pint of water bitter. But the sweetening properties of this silver salt were only a scientific fact of little use in practical life. Some years ago, however, Dr. Fahlberg, as the fruit of eight years' incessant work and dauntless perseverance, succeeded in converting saccharine, a singular derivation of coal-tar, and quite unconnected with the silver salt named above, from a mere laboratory curiosity into a commercial product, and perhaps Sir Henry Roscoe, one of the most competent judges in the world, did not go too far when he called saccharine "the most remarkable of all the marvellous products of the coal-tar industry."

Saccharine has been attracting the attention of medical men, and according to the medical papers, which are, however, always rather sanguine, will prove invaluable in covering the nauseous and loathsome taste of some of those powerful new medicines with which science has enriched the Pharmacopœia, and which, although useful beyond all expectation are sometimes most unpalatable, or, indeed, like cascara sagrada, so nauseous that many sufferers rather bear the ills they know than face the still more unpleasant ill of being half poisoned by the foul smelling and disgusting remedy.

I shall not attempt to describe the steps of manufacture of saccharine, nor shall I perplex myself and alarm the reader by half a page of chemical symbols, which another advance in chemistry may cause to be abandoned. Suffice it to say that saccharine, or benzoyl sulphonic imide, is a white amorphous powder, which when examined under the microscope is found to have a distinct crystalline

appearance. It is intensely sweet, although when tasted in its pure form is not nearly so overpoweringly sweet as one would expect from the descriptions given in the papers. This is at first disappointing, but the discoverer stated at Manchester at the British Association gathering there, and there is nothing improbable in his explanation, that the intensity of the sweet flavour gave rise to so acute an action on the nerves of taste that it deadens them, in the same manner as too powerful a light will dazzle rather than assist vision. Saccharine must, therefore, be looked upon as an essence, which, to be of practical use, must be freely diluted, and in this respect it is analogous to vanillin, another of the recently discovered derivatives of coal tar, which is superseding the once familiar natural vegetable product, vanilla, as a flavouring material.

In cold water saccharine is only slightly soluble; in water of the temperature of 120° Fahr., it is only moderately soluble; while even in boiling water it is not perfectly soluble, but when the solution is neutralised, and carbonate of soda or carbonate of potash is added to it, the solubility is greatly increased. When saccharine is added to a solution of carbonate of potash, or of carbonate of soda, carbonic acid is freely given off, and a compound of soda or potash salts with saccharine is formed. It is found that these salts are nearly as sweet as saccharine itself, and as they are soluble they are far more convenient to use. One tabloid is fairly equivalent to a lump of white sugar. I find that it is better to put the tabloid into the cup, and then add the hot coffee or tea, and finally the milk. In a week we would get used to saccharine tabloids, and not miss the more familiar, though hardly more palatable, cane or beet-root sugar.

Alcohol, which will dissolve so many substances on which water alone will hardly act at all, will also dissolve saccharine, and no doubt in time the manufacturer of pure unadulterated sweet wines, cordials, and liqueurs, will not forget to add it to his armoury. Mosso has carefully investigated the subject, and finds that one gallon of ten per cent. alcohol will dissolve 378.7 grains of saccharine; one gallon of 40 per cent. alcohol will take up 1391.6 grains; one of 80 per cent. will hold 2250.5; while absolute alcohol will only suspend 2118.9 grains. The reader will notice that an 80 per cent. mixture of alcohol and water takes up the largest amount of saccharine; it is, by the way, often curious, but true, that the strongest solvent, as at first sight it appears, answers worse than a weaker form of the same solvent. Saccharine is also abundantly soluble in warm glycerine. At a temperature of 224° Fahr. saccharine melts, and then is partially decomposed and gives off a characteristic odour. Professor Stutzer, of Bonn, tells us that one grain of saccharine will distinctly sweeten 70,000 grains of pure distilled water.

Saccharine is not a fermentable sugar, and will therefore certainly soon come into common use in the treatment of many diseases, and will be used in many cases in which the palate craves for sweets, but in which ordinary cane sugar cannot be permitted without distinct danger to the sufferer. Still more, to exalt the claims of saccharine to attention, Aduco, Mosso, Stutzer, and Stadelman, all assure us that it is antiseptic, and it is stated not to have any action on ptyalin, diastase, and the digestive functions of the human economy, and passes unchanged from the system.

It is quite a relief to find that it is not expected to drive cane sugar out of the field: that would indeed have been a

bitter pill to swallow, but there can be no doubt that it will, to some extent, enter into formidable competition with it, especially in the making of confectionery and preserves, and sweetmeats are being prepared that, while not less palatable than those we are accustomed to, are decidedly less objectionable. But I must pause, leaving unsaid much that is claimed for saccharine—that truly marvellous product of modern chemistry.

CASE OF CEREBRAL ABSCESS.

By J. JOHNSTON, M.D. EDIN., L.S.A.,

BOLTON.

THE following brief notes of a case of this somewhat rare affection may be of interest:—On September 6th, 1887, I was called in to see M. W—, a well-developed and previously healthy girl, aged thirteen years, whose father had died of consumption. She was suffering from intense diffused headache, intolerance of light, dilated pupils, high temperature, quick bounding pulse, sleeplessness, sickness, and constipation. After persisting for four days, these acute symptoms gradually subsided, the headache became localized to the left side, and a slight discharge of semi-purulent matter came from the left ear. Next day (September 11th) the discharge from the ear had ceased, and the patient was suddenly seized with a convulsion of three hours' duration, affecting the right side of the head, face, trunk, and the right arm and leg. This was followed by a succession of milder convulsions, affecting the right side, varying in duration from an hour to ten minutes, but gradually diminishing in force and frequency, until they ceased altogether on the third day after commencing (September 14th). Upon their cessation it was found that the patient was hemiplegic on the right side and completely aphasic. There was no ptosis, no inequality of the pupils, nor any loss of consciousness, except during the convulsions. The acute symptoms had now subsided, the pulse and temperature being almost normal, but the left-sided headache continued at times to be very severe. During the next three days there was a gradual, but decided improvement in her condition, the hemiplegia disappearing, and the aphasia improving so much that the patient could utter little words, such as "mother," "oh my," etc. She also partook freely of nourishment, and never lost consciousness, nor was there any recurrence of the convulsions. The pain upon the left side of the head ebbed and flowed, being at intervals very agonising, and only controlled by strong anodynes, etc. In spite of the apparent improvement, she gradually lost her strength, and died quietly in the early morning of September 19th, conscious to the last.

The *post-mortem* examination revealed a large collection—about three ounces—of yellow, creamy, semi-putrid pus in a cavity situated between the *dura mater* and the arachnoid, just over the left fissure of Rolando, and extending from the longitudinal sinus down to the base of the brain. Some of the pus had found its way into the longitudinal fissure above, and into the upper portion of the spinal canal below. The site of the abscess was marked by a distinct ovoid depression upon the surface of the brain, measuring about three inches by two. The arachnoid and the substance of the brain beneath the abscess were anæmic, while on the right side they were much congested. The substance of the *dura mater* covering the lower part of the abscess cavity was found to be very much thickened and infiltrated with a mass of tubercular material. As we were

only allowed to open the head, the condition of the other organs could not be ascertained.

NOTE.—Although the apparent improvement seemed to cast a doubt upon the diagnosis to which the symptoms pointed, I should not hesitate in any future similar case to trephine, as the only chance of saving the patient's life.

TREATMENT OF WHOOPING COUGH.

By E. G. SIMPSON, L.R.C.P., ETC.,

CIVIL SURGEON, OUDH.

THIS epidemic occurred in the Sihsagor district, Upper Assam, amongst the children of a batch of Ooran coolies, and was confined to them alone, although they were living in the midst of Bengalese, and other natives from the north-west of India. Twenty-three cases constituted the whole epidemic, and held fast to a group of some twenty houses, occupied by the same caste and tribe. No adults were attacked. Three methods of treatment were adopted, with results as follows:—One case died, a child aged seven years, who was suffering from dysentery, and was in a weakly state when attacked with the cough.

<p>Rx Tr. belladonnæ, ℥i. to iij. Vin. ipecac., ℥ij. to v. Mucil. acaciæ, 3 ss. to 3 i. Syr. simplicis. Aq. camph., aa ad. 3 i. to 3 ij. Every three hours.</p>	<p>Males, 3 Females, 1 } 4</p>	4 to 7.	1	..	<p>Duration of disease, 40 to 90 days.</p>
		2 to 4.	..	..
		1 to 2.	1	1	
		1 year.	1	..	
		Under	Males	Females	
<p>Alum ½ to 2 grain powders every hour up to 12 doses a day.</p>	<p>Males, 2 Females, 3 } 5</p>	4 to 7.	..	1	<p>Duration of disease, 40 to 90 days.</p>
		2 to 4.	..	1	
		1 to 2.	1	..	
		1 year.	1	1	
		Under	Males	Females	
<p>Rx Acid carbolic, ℥i. to ij. Vin. ipecac., ℥ij. to v. Acaciæ gummi, grs. v. to x. Syr. simplicis, 3 ss. to 3 i. Aq. camph., ad. 3 i. to 3 ij. Every three hours.</p>	<p>Treated—Males, 6 Females, 7 } 13</p>	4 to 7.	1	2	<p>Duration of disease, 14 to 18 days.</p>
		2 to 4.	1	..	
		1 to 2.	2	2	
		1 year.	2	3	
		Under	Males	Females	

The case of dysentery with whooping cough was treated chiefly for the former disease, so is not given in the above tables. The treatment of the first cases was taken up in rotation, but when it was found that the carbolic acid acted like a charm, the other two methods were given up.

Remarks.—I have treated altogether 240 cases of this disease, and with the exception of the case noted, have had no deaths, showing that the disease is not a fatal one *per se*, unless complications arise, or another disease exists. Symptoms are invariably preceded by fever and catarrh, leaving an irritable state of the mucous membrane, the cause of paroxysms and whoop being an irritated condition of the ends of the pharyngeal branches of pneumo-gastric nerve. The frequency of the paroxysms depend on the degree of irritability, more or less varied by the use of the throat in talking, etc., and the time taken in generation of nerve force. Carbolic acid was used as a nervine sedative, with a result that speaks for itself.

All the other cases were treated by most of the various methods recommended, but none of those in any way approached the decided and quick benefit derived from carbolic acid. When a child of about seven years of age, I had whooping cough, and the medical attendant prescribed for me every evening tartar emetic to induce emesis. *Cui bono?* I do not recollect it, but I looked upon it as a severe punishment.

In Lancaster a good many of the people have an idea that the inhalation of gas is beneficial, and advise their children afflicted with whooping cough to rush into gas manufacturies, but the results are doubtful, for it appeared to me that the disease hung on for three months or more.

IS CRANIOTOMY JUSTIFIABLE?

By T. READMAN, L.R.C.P., ETC.,

FELLOW OF THE BRITISH GYNÆCOLOGICAL SOCIETY.

[It was originally intended that the following paper should be read before the Obstetrical Society of London. It was presented by one of the Society's most eminent Fellows, and submitted to the Referees, who advised that it should be read and published. In spite of their Referees' decision, the Council refused to have it read. Of course, it is a well-known fact that the Obstetrical Society is the seat of the head and front of the offending in this matter.]

WERE I about to obtrude my own ideas and opinions upon you, I am afraid I should sorely lack the courage necessary to enable me to do so. I merely wish to place before you old facts in a new form, to look at this important question in a new light—in the light of modern statistics.

Having regard to the general advance of medical and surgical science, especially during the last twenty years, is it not surprising that an operation so pernicious and disgusting in itself, so repulsive and unscientific in its procedure, and so fatal and disappointing in its results, should still be recognised and sanctioned by the profession, and should still be taught in our medical schools? Now when abdominal surgery has been stripped of most of the horrors with which twenty years ago it was enshrouded, may we not hope that the present generation may see the perforator laid aside, and more rational and scientific operations substituted for this barbarous proceeding? Does it not seem monstrous that, when we have a thoroughly scientific and tolerably safe alternative, the taking away in the most brutal manner the life of an innocent child should still be preferred? Is such conduct consistent with the great fundamental law of Christian ethics, that evil is not to be done that good may follow? Dr. Meadows, in a paper which he read before the British Gynæcological

Society, said: "My opinion is that the whole tendency of modern midwifery practice is setting in very decidedly in the direction of absolutely and entirely abolishing this most abominable, unscientific, and brutal proceeding, and I am strongly of opinion that, if not in our day, at least before another generation of gynæcologists shall have passed away, the practice of deliberately sacrificing a human life will be regarded as wholly unwarrantable, and not to be contemplated for a single moment in the face of other more scientific, more humane, and far more successful modes of treatment."

Is it right to kill the child when this is considered a necessary means of saving the mother? The answer to this serious question constitutes the answer to the chief argument now-a-days used in favour of craniotomy. We are taught to sacrifice one life to secure the safety of another, the mother's safety being purchased by the destruction of her child. On this point allow me to quote a few words of Mr. Lawson Tait; he says: "The child has no one to look after its interests, and it is the only person in the relations whose vote concerning its presence has not been asked for or obtained. In this defenceless position it therefore is peculiarly deserving of consideration, and it is a terrible responsibility for anyone to undertake its deliberate destruction."

There is not a single argument from authority or reason to justify the killing of a guiltless individual. If the child was born, who would dare to plunge an instrument into its brain, even if its death—if we could suppose such a state of things—was considered necessary to save the life of the mother? It is morally murder in either case, for in either case you are taking away a life. But surely, says the craniotomist, it is better to save one life than to lose both, and of the two we should preserve that which is far the more precious and important. But we answer, who is to judge which is the more precious and important? Churchill says: "No man dare make such a choice, for we have neither the necessary knowledge, nor the right, nor the authority to decide which is the more important life, and the best worth preserving." If we may take away one life to save another, if we may sacrifice the less important to save the more precious, we may of course occasionally kill the mother to save the child, because in our limited judgment there are many circumstances in which the life of the latter is much more precious and important than that of the former. All wives and mothers are not perfect. The only just conclusion we can come to is that we have as much right to kill the mother to save the child, as we have to kill the child to save the mother; in other words, we have no right or authority to deprive any human being of life. "Human life is held at the will of one Supreme Being alone, and to no human hand is delegated the power of destroying it."

As bearing upon this part of the question, I am about to quote *in extenso* the summing up of Mr. Justice Stephens in the case of the Queen v. Cocks, Evans, Gleaves, and Webster, which I hope will be fresh in your memories. I have thought it well to give Justice Stephens' address almost verbatim, because I think it illustrates the state of the law as to the taking away of human life through necessity; there is not a single sentence in the learned judge's remarks which might not be addressed to a surgeon were he on his trial for having performed the operation of craniotomy. These men were charged with causing the death of a Malay sailor known as Hassim, by shooting him while on board the barque,

¹ "The operation of craniotomy consists in plunging an iron instrument into the skull of a human being . . . in the whole range of surgery this is the only operation recognised and sanctioned by the profession with the avowed intention of destroying life."—*Ramsbotham*.

Lady Douglas, of Glasgow, on a voyage from Australia to England, on April 23rd, 1887.

Mr. Justice Stephens, in summing up, said: "It was the bounden duty of the jury to judge the conduct of the prisoners according to the rules of law he would lay down for them, and which were the rules of rational justice and common sense, making full allowance for the difficulties in which they were placed, but requiring them at the same time to behave with courage and humanity. Two of the four things alleged in their defence were that they were excused by necessity, and that they acted in self defence. It was hardly possible to put a case where the taking away of human life through necessity would apply, especially after the decision in the case of the *Queen v. Dudley and Stephens*, where the fact of two men in an open boat in mid-ocean killing a boy to preserve their own lives by eating his body, was held to be murder. An idea which ran through the defence was that the captain and the crew had a right to take this poor man's life because it was more or less inconvenient to them, and because they came to an agreement to shoot him. A more terrible claim, one more emphatically to be repudiated and declared to be unfounded, he could not imagine. To say that the captain and his crew meeting together in a cabin had the power to declare that one should be shot because he was dangerous, that one not being heard at all, was a monstrous doctrine. The jury must beware that their verdict did not encourage timid men under circumstances of difficulty to get out of their difficulties by taking away the lives of some of their number. Before they could excuse what was done, they must be convinced that the men on board this ship were in greater danger than the two men who killed the boy on the open sea to preserve their own lives."

The jury, after a deliberation of two hours and a half, returned with a verdict of wilful murder. Mr. Justice Stephens, in his remarks in passing sentence of death on all the accused, said: "The jury had returned the only verdict they could possibly have returned in this case—namely, that you and each of you were guilty of wilful murder. I cannot help saying that it appears to me that there was a want both of humanity and courage in the line of conduct you deliberately pursued."

Craniotomists destroy one life to save another; that is the plea of necessity; but, in the above case, in the prisoners opinion, they destroyed one life to save the lives of all the crew. For the man Hassim was located in the coal hole; he was possessed of matches, with which he might any time have set fire to the ship, and a crowbar and knife, by means of which he could have made a hole in the ship and sunk her and her crew. Yet the accused were found guilty of wilful murder, and sentenced to death.

There is not the slightest doubt that craniotomy is often practised without necessity. Mr. Lawson Tait speaks strongly on this point, "I am perfectly certain," he says, "from what I see in publications, and from what I hear from the lips of men in practice, that a perfectly unjustifiable amount of child-murder by craniotomy is practised." Dr. Churchill wishes it to be impressed upon every practitioner that he who destroys the child without due evidence that this is *his only means* of saving the mother, is *guilty of murder*.

Taking them in order the first alternative to craniotomy is the induction of premature labour; for this to become really effective we should have to adopt some such method as that proposed by Dr. Edis. He advocates strongly the

necessity of examining every patient at least two months before the time of her expected confinement, in order to determine whether parturition was likely to be attended by any unusual risks and difficulties. Of course I am aware that this plan is pursued by many medical men, but in order to make it really thorough in its application it must be universally adopted. I should like to ask you if you do not think that any medical man, having charge of a pregnant women whose pelvis he knows or suspects to be deformed, or when it has been proved by actual experience and to an absolute demonstration that a full-sized head cannot be born alive, would not be guilty of a grave breach of duty, were he—knowing full well the difficulties and dangers he would have to contend with—wilfully to allow the patient to go beyond the seventh month of pregnancy? And yet how often is this precaution neglected! To this operation, provided it is not undertaken before the child has obtained sufficient maturity to enable it to live outside it's mother's womb, there can be no objection, because it allows a fair chance of life to both mother and child. If this line of conduct were strictly followed out, if, when we have the faintest suspicion of a deformed pelvis, we would take the precaution to ascertain whether a full-sized head can or cannot pass through the pelvis, we should probably very much reduce the number of cases in which the question we are discussing, would have to be broached.

If the pregnancy is too far advanced for the induction of premature labour to be of any advantage, our only alternative is abdominal section. To the term Cæsarean section I have objections; it is associated in the minds of English surgeons with statistics denoting a large percentage of failures. Ordinary practitioners, as a rule, look horror-stricken at the bare mention of the name, they are shocked at the very idea of touching the abdominal wall with a knife. How is it that British and foreign statistics differ so widely. The reason is not far to seek. It is simply because Cæsarean section never enters the minds of British surgeons, until every other means, the perforator included, have been tried, until the woman lies moribund; then perhaps the surgeon—brave man!—finds courage enough to do abdominal section. But under these circumstances, what other than a fatal result could possibly be expected? How can a fair estimate of the worth of an operation be formed on statistics such as these? To quote Dr. Kinkead's eloquent remarks, "Then when the patient is exhausted by pain and frequent expulsive efforts; when structural change, produced by protracted uterine contractions, has taken place; when she sinks from shock or falls a victim to the sequelæ, almost necessarily resulting—the case is quoted as an additional item in the sum total testifying to the essentially fatal nature of Cæsarean section."

Dr. Harris and Dr. Säger report the result of thirty-one operations performed, after what is known as the Säger method; this report brings the subject up to June, 1886. Of these thirty-one operations twenty-three were performed in Germany, four in Austria, two in France, and two in Italy. The maternal mortality in these cases amounts to a little over twenty-one per cent., and in the case of the children a mortality of seven per cent., in other words twenty-four out of thirty-one mothers were saved, while twenty-nine out of thirty-one children survived.

Dr. Meadows, in quoting these statistics, remarks, "I venture to affirm that craniotomy in comparison with this operation becomes at once almost unjustifiable; for these figures show that, as regards the maternal mortality, it is

little, if at all, more dangerous than craniotomy, and in the latter case all the children would be sacrificed, while in the former twenty-nine out of thirty-one, or about ninety-three per cent. were saved! From July, 1885, to July, 1886, twenty operations have been reported, resulting in the saving of eighteen mothers, giving a maternal mortality of ten per cent., and of the twenty children nineteen were saved, thus bringing down the fetal mortality to five per cent. Nor is the success noted above in any way due to the superior skill of any one operator, they were scattered over the continent, and the thirty-one operations were performed by no less than eighteen different operators. As Dr. Harris remarks, "this success is due to the operation having been elective, and not the *dernier ressort*, and this will be the general result whenever obstetricians shall be made to comprehend the value of an early elective operation."

"Where is craniotomy now?" asks Dr. Meadows in quoting the above. Yes, where indeed. Dr. Harris strikes the keynote of the whole question when he says "this success is due to the operation having been elective and not the *dernier ressort*." Surely these figures will tend somewhat to dispel some of the terrors which abdominal section has for a British practitioner, and to give him a little more courage and determination, will help him to decide whether he shall deliberately take away an innocent life, or whether he shall give to mother and child an equal chance of surviving.

Can anything be more revolting and disgusting than the following case recorded in the *Med. Chirurg. Trans.*, Vol. xii., p. 308, "in which a child lived for forty-six hours after its extraction, although the cerebrum was completely broken down, and about two ounces of brain were taken out. It cried frequently and loudly, passed fæces and urine, and for twelve hours the functions of life seemed to be carried on in the usual healthy manner."

No one I think will deny that it is anything but a universal custom to extract the child by Cæsarean section, should a mother unfortunately die during labour or late in pregnancy. Does it not seem a pity that the moral necessity of extracting the living child from the womb of its dead mother should not be more seriously impressed on the minds of students? Does our code of morals become less stringent as generations pass away? Certain it is that we are not nearly so strict on these points as were the ancient Romans, for their laws prohibited the burial of a woman who had died pregnant "*antequam partus ei excidatur*." Some of the most eminent men owed their lives to the enforcement of this law.

I should like, before concluding, to quote the following summary of Dr. Barnes, in a paper on the alternatives of craniotomy, read in the Section of Obstetric Medicine, at the annual meeting of the British Medical Association, 1886:—

"1. The legitimate aspiration and tendency of science is to eliminate craniotomy on the living and viable child from obstetric practice.

2. The advance of hygienic rule, the improvements in the forceps, in turning, in the induction of labour, and in obstetrics generally, have materially curtailed the field within which craniotomy can be justifiable.

3. In the most extreme degree of pelvic distortion, where delivery *per vias naturales* can only be effected with doubtful success to the mother, Porro's operation is the legitimate alternative for craniotomy, it being understood that the opportunity of inducing abortion has gone by.

4. In less advanced degrees of pelvic contraction, but still incompatible with the delivery of a living child, *per vias naturales*, the opportunity of inducing abortion having gone by, but in which craniotomy would effect delivery with a strong presumption of safety to the mother, the Cæsarean section may be a proper alternative for craniotomy. This is the most debatable point.

5. In minor degrees of contraction, say from three inches to three and a half or three and three quarter inches, the opportunities of inducing labour having gone by, the far greater safety to the mother obtained by craniotomy, and the prospect of living children in future labours, make craniotomy the proper course to adopt.

6. In other emergencies than deformity, as in obstructed labour from ovarian tumour, the alternative to craniotomy is to remove the tumour.

7. In cases of immovable tumour, Porro's operation is the proper alternative.

8. In rupture of the uterus, the child being delivered or not, Porro's operation is the proper alternative. There the interests of the mother and child coincide.

9. In cases of disease or tumours of the uterus obstructing delivery, Porro's operation is the proper alternative.

10. In atresia of the cervix or vagina, Cæsarean section or craniotomy may be necessary, but incisions and gradual dilatation will more frequently be the proper alternatives.

11. When obstruction is due to hydrocephalus or dropsy in the child, embryotomy or tapping is indicated, and decollation when the child is impacted and turning hazardous.

12. In convulsions and hæmorrhages the proper alternatives for craniotomy are found in the more scientific methods of conducting labour under these complications."

With regard to paragraph 5 of the above summary, I am afraid Dr. Barnes has not been correctly reported; he says, craniotomy is justifiable in contractions of $3-3\frac{3}{4}$. I would ask—with all due respect to such high authority—are we then to abolish the use of version and forceps, for we are told, on both Scottish and American authority, to use forceps and version down to three inches at least.

Dr. Lusk gives it as his opinion that, "*under $2\frac{3}{4}$ inches, that is below the limit where premature labour and version are available*, modern methods of Cæsarean section are preferable to craniotomy."

Again, with regard to paragraph 11, we must still maintain, for the reasons I have already given, that no malformation or disease of the child short of death will justify operations involving the destruction of the child. I believe that nothing less than the total abolition of craniotomy will be tolerated when once the profession is brought to view this sacrificial operation in the true light, and when the surprising statistics of modern Cæsarean section and Porro's operation become well known.

So long as surgery teaches and sanctions craniotomy, so long will our profession, which is acknowledged to be of the noblest, labour under the stigma of legalized child-murder. There is no getting out of it, argue as you will, in doing craniotomy, you are committing a murder, for which you have no just excuse; for has not one of our greatest authorities declared that he who destroys the child without due evidence *that this is his only means* of saving the mother is guilty of murder? It will not do now, in the face of modern statistics, to say that you kill the child in its mother's womb because you think that this is the only means of securing the safety of the mother; there are other means you can adopt, and the facts and statistics I

have brought forward show that these will not unduly jeopardize either life, but will give to each a fair and equal chance of survival.

Meadows, Barnes, Tait, Snger, Harris, Tyler-Smith, Kinkead, and others have sounded the death-knell of craniotomy. It will live only to be remembered as an act of barbarism practised in a less enlightened age. Obstetricians of the future will wonder that such a barbarous custom was so long tolerated, that such a blot was allowed to remain to sully the fair name of so noble a profession, whose avowed object it is to save life, and never wilfully to destroy it. Let us bury craniotomy and strive to forget it, forget that the faculty could ever have given its sanction to so revolting a means of securing the safety of the mother.

Far be it from me to think even for a moment that craniotomy was ever wilfully performed without necessity; if I have said anything that has conveyed to your minds an impression to the contrary, I would wish to withdraw it, for I hold no such mean opinion of the honour and morality of the members of the profession to which I have the honour to belong. I firmly believe that medical men, have, as regards this operation, always acted in perfect good faith and according to the best of their understanding.

Do allow me to earnestly and fervently appeal to you to give your most serious consideration to this all important question. Let us hope that the time is not far distant when under the pressure of modern statistics and a more rational consideration of this issue, we may see the total abolition of craniotomy an accomplished fact.

CARDIAC TONICS.

By J. C. WADDELL, M.D.

COMPARISON of the practice of medicine of to-day with that of fifty years ago shows most clearly what may be termed an entire change of front. The practice of fifty years ago was essentially a treatment of results; that of to-day is fundamentally the treatment of ultimate causes. The greatest development in the whole field of medicine has been in the direction of etiology, and the great light which scientific research has shed upon the nature of the conditions occurring in disease has indicated most clearly the line which therapeutics should take. Most especially those researches into the presence of bacilli in the human organism and their development, has proved the enormous power possessed by the vigorous physical constitution, not only in resisting the onset of disease, but also in quelling it, even when established. Disease in a feeble-powered and in a full-powered frame takes ordinarily a different course; and this has been so evident for a long time, that it has been recognised as a cardinal point of successful treatment of the body when suffering from disease, that its powers must be guarded, economised, and developed to the utmost extent. Although in the human economy each organ seems dependent to some extent upon all the others, yet the prime place must necessarily be accorded to the organs of circulation, inasmuch as while so long as the circulation of the blood remains perfect and unimpaired, almost any of the other functions of the system may be incomplete, or any of the other organs affected, without necessarily affecting vitality; but when the circulation of the blood becomes imperfect, or is arrested, then everything is affected, and vitality is imperilled. For this reason the possession of means to enable us to deal directly with the heart and its functions has long

been an eager desideratum to the physician; the power to stimulate or to depress, to increase force or diminish it, to increase tone or lessen it, are ardently sought and longed for. Remedies which will affect the tone of the heart and organs of circulation are, for obvious reasons, those which are most needed, and, unfortunately, we have but few.

Digitalis is the best known and most familiar, but even this is of comparatively recent date. Until about 1860 it was little more than barely known to the profession, and since that time experience has proved so many dangers connected with its action, that the need of remedies which will produce an equal effect without its cumulative tendency has become almost imperative. The therapeutics of to-day gyrate round one central point, that of preserving the balance of power of the circulation of the blood. There is a certain standard which cannot be either exceeded or diminished without some disturbance of the whole organisation. This healthy standard may be best described by the expression "tone." Therapeutically, drugs acting upon the circulation may be divided into six groups.

(a) *Cardiac Stimulants*.—These act rapidly by increasing force and frequency, and counteracting depression. Ammonia and alcohol may be regarded as typical.

(b) *Vascular Stimulants*.—These are defined by Lauder Brunton as "substances which cause dilatation of the peripheral vessels, and thus render the flow of blood through them more rapid;" they do not, however, increase the contractile power of the vessels, nor the activity of the vaso-motor centres. Heat, alcohol, and some diaphoretics are typical of this group.

(c) *Cardiac Tonics*.—"These are drugs which have no perceptible immediate action on the heart, but when given for a little while, render its beats much more powerful, though much slower" (Lauder Brunton). The most important are—digitalis, strophanthus, convallaria, and viscum album.

(d) *Vascular Tonics* cause increased contraction of arterioles or capillaries—raise blood pressure and influence to a considerable extent the amount of lymph poured out into or absorbed from the tissues. The most important are—digitalis, with the other cardiac tonics mentioned, and iron and strychnia.

(e) *Cardiac Sedatives*, which lessen force and frequency of heart's action, and are useful in violent action of the heart, or for rendering the pulse slower. The most important are—aconite, veratria, and antimony.

(f) *Vascular Sedatives* increase the contraction of the vessels, and lessen the flow of the blood through them, and are useful chiefly in local inflammation or to arrest hæmorrhage. The most important are—cold, ergot, hamamelis, acetate of lead, etc.

It is with the groups of cardiac and vascular tonics that we are now concerned. All cardiac tonics may be considered as indirect vascular tonics, and, therefore, in the following remarks we shall not consider them separately. In practice the cases in which we find that cardiac tonics are serviceable may be divided into two classes—those in which the heart is feeble or inefficient in action, but free from valvular lesion and those in which there exists a lesion or important structural change. The former constitute the most frequent, and practically the most important. Where a lesion exists the patient can be brought to understand why the general health should be affected, and any of the well-known symptoms of "heart disease" be present; but where no lesion exists, where there is no organic mischief but merely functional derangement, it is often very difficult

to keep a patient's mind easy and prevent them rushing from one practitioner to another, in the desire to obtain relief or cure. Further, when the general health and physical powers have become enfeebled, it is very important for the practitioner to possess the means of getting his patient rapidly well. Or during the course of some other ailment, which depreciates vital power—it is most important to possess means which will act as support or stimulus to the flagging circulation. Such are some of the points which appeal most strongly to the minds of general practitioners, who naturally wish to know what will most readily and certainly effect their purpose, without entailing profound study of details or considerations as to motor-ganglia, vagus centre, accelerating centre, and so on. Cardiac tonics act upon the cardiac muscle and render its contraction slower and stronger. This is their usual effect when given in moderate doses; when given in larger doses they produce effects of a different, and in some instances of a dangerous and undesirable, character—to be referred to later in connection with each of the drugs dealt with.

The cases for which cardiac tonics are most desired may be summed up under the term "weak heart." This may occur under a variety of conditions, such as anæmia, chlorosis, neurotic idiosyncrasy, after exhausting affections such as acute fevers, habitual over-exertion, alcoholic and nicotine asthenia, chronic pulmonary complaints, more especially indurations of the lung. Weakness of the heart is not necessarily associated with, but is frequently accompanied by, dilatation and functional, or, as we may term it, asthenic incompetency of valves. As a rule, this class of drugs will be found most serviceable in cases where the propelling power of the left ventricle is defective. This condition may be due to asthenia of the ventricles, without any form of lesion, to irregular action of the other cavities, and, of course, to valvular lesions of various kinds. Whenever the venous system is gorged, cardiac tonics are serviceable by strengthening the action of the muscle. They increase the systolic power of the left ventricle, which, propelling a greater quantity of blood into the aorta, enables a longer diastole to occur, with the inevitable result that the lungs, right side of the heart, and venous system generally, are freed from over-pressure.

The principal cardiac tonics known to us at present are, according to Lauder Brunton—

<i>Digitalis.</i>	<i>Adonis Vernalis.</i>
Digitalin.	Adonidin.
Digitalein.	<i>Squills.</i>
Digitoxin.	Scillain.
<i>Erythrophlaxum (Casca).</i>	<i>Helleborein.</i>
Erythrophlocin.	<i>Antiarin.</i>
<i>Strophanthus Hispidus.</i>	<i>Caffeine.</i>
Strophanthin.	<i>Nux Vomica.</i>
<i>Convallaria Majalis.</i>	Strychnine.
Convallamarin.	

To these must be added *Viscum Album*, or Mistletoe.

(To be continued.)

SEPTIC PNEUMONIA.¹

BY FREDERICK H. ALDERSON, M.D.,

LATE PRESIDENT OF THE WEST LONDON MEDICO-CHIRURGICAL SOCIETY.

THE subject that I have selected to read a case upon is one, probably, of interest to all who practise medicine; the consideration of the pathology of septic pneumonia is, perhaps, one particularly calculated to produce a lively and not unprofitable discussion, and is upon a subject, too,

¹Delivered before the West Kent Medico-Chirurgical Society, February 3rd.

that medical men may with honesty form their own opinion from their individual experiences as to the order and specific nature of this very acute disease. In thus calling the attention of this Society to a case, as I believe, of septic pneumonia, I will first describe what I mean by such definition. I desire to differentiate that form of inflammation of the lungs which has its origin in blood-poisoning, *i.e.*, is the result of direct infection, differing from pyæmia, inasmuch as that disease invariably has a local origin, and the lung affection is only one of many subsequent complications, the dire result of a local proximate cause.

Recent able authority has determined that pneumonia is to be regarded as a specific infectious disorder, rather than a disease due to exposure; and the following case, occurring in my practice in the height of summer, and one where the patient was often incurring undoubted risk of infectious exposure, tends to confirm this opinion, although I quite believe with that clinical physician of solid repute, who in a late discussion expressed his confident belief "that if we were for a moment disposed to give up chill as an etiological factor in fibrinous inflammation of the lungs, we shall soon have to come back to it."

William Booth, æt. twenty, died somewhat suddenly at 8 p.m., Monday, July 10th, 1887. W. B. was a pawnbroker's assistant, but did not sleep at the business premises. I obtained the following history of his illness and death from his fellow-assistant, who shared the same bed-room with the deceased. These particulars were confirmed and supplemented by his brother and brother-in-law, who was manager of the business where W. B. was employed:—Charles Edward Cooper told me he was engaged in the same firm as the deceased, and slept in the same bedroom. W. B. left business as usual at 12 o'clock on Saturday night, very tired after a hard day's work, but he did not complain of being ill or of feeling unwell. He coughed occasionally, but not more than usual. He had been much worried in the morning by his master blowing him up because the shop was not open. Cooper noticed on Sunday morning that his face was flushed, and he complained of feeling poorly. His breath appeared quick and short. He got up, but could not eat his breakfast, and said his head ached. He went with his brother—a boy of fourteen, and who had slept in the same bed with him on the previous night—to the public baths, where he had a warm bath. He returned home, and went at once to bed, keeping in bed all day. It was noticed that he was hot and feverish. Cooper was away all Sunday, came home to bed about 12.15 a.m. on Monday morning. He asked him for water, and drank it as if thirsty. He did not disturb him in the night, but on his waking about 7 a.m. he heard deceased breathing very hard, but he was conscious, for he answered him. He at once got up and went for me (my house was about five minutes' walk). I hastily dressed, and returned with him. On our arrival we found W. B. dead. The body was warm, the countenance peaceful, the pupils slightly contracted. A slight rash was noticed on his back and arms, which possibly might have been caused by pressure of laying. Autopsy about thirty hours after death. The slight mottling of the skin that I had observed immediately after death had almost entirely disappeared. The body was clean, well nourished, and apparently that of a healthy, vigorous youth, nails bluish, slight rigidity. About two ounces of clear straw-coloured fluid was found in the pericardium. There was apparently no external pericarditis. The heart was of normal size. The aorta

was much inflamed, especially near the valves. There was slight commencing atheromatous deposit on the anterior valves. The right auricle was rather dilated, the substance of the heart was flabby and soft. The cavities were empty, with the exception of one or two fibrinous clots in right ventricle, white, but not grooved. Lungs were firmly adherent. The pleural cavities were obliterated by old adhesions. The right lung had to be torn away, and was much engorged with dark venous blood. The lower lobes were soft, and easily broken down. The lung floated in water, but not buoyantly. The left lung was congested, but not friable, and less adherent than the right one. The stomach was collapsed and empty. Some discolouration in patches, apparently *post-mortem*. The rugæ were rather large. The spleen was very large and heavy, about three times the usual size. The liver was greatly enlarged, and extended three inches below the level of false ribs. There was no peritonitis; the bowels were healthy, and the kidneys normal.

After the *post-mortem*, I made special enquiries as to his habits. There was no history of intemperance, and as he had lived some time with his brother-in-law and sister, they must have known if he had been either intemperate or unsteady. I had carefully examined him two or three years before his death for a life office, and I noticed there was a want of expansion of his lungs, and he acknowledged he was subject to an occasionally irritating cough, but said he had never been ill, excepting when a child with children's diseases—and how often are these diseases of childhood taken as a matter of course, forgotten by the parents, and too often ignored alike by the patient and the examiner of the life office. Deceased's life was accepted by the Gresham, although allowed to lapse from non-payment of premium.

It is perhaps important to mention that W. B.'s brother-in-law, who was manager at the establishment where he was employed, told me that it was a part of W. B.'s duties to fix the tickets and to examine articles pledged. He also told me that there was a very bad smell in the shop, that was afterwards found to come from an old unused drain, which was situated just under where deceased stood for several hours on the Saturday preceding his death. The manager had several times complained of this smell, and called the attention of the landlord to the unsanitary state of the house.

Infectious pneumonia is more frequent than is, perhaps, generally thought. Very often we have a case of high fever, no rash, hurried breathing, quick pulse, and perhaps diarrhoea, accompanied with fine crepitation at the base of the lungs. Where there is no history to be obtained of cold, and although, perhaps, no positive history of infection, septic origin is a reasonable, and perhaps a probable cause of the illness.

The case I have related—although as to the true character of the disease, is not perhaps to some of you without doubt, but looking at it, as I have at least grounds for, as a case of septic pneumonia—is, perhaps, of some value. For I think the extraneous origin of the disease was evident, *i.e.*, it was a case of blood-poisoning from the very first; and thus in contra-distinction to those authors who infer the auto-genetic origin of the disease, and teach if pneumonia is ever caused by a parasite (and I see no reason why we should doubt the existence of a bacillus pneumonia any more than the bacillus of tubercle or cholera), it is developed in the patient *after* the illness has begun.

Since I have written this paper I notice an interesting paragraph in the *British Medical Journal*, January 28th, page 202, headed, "A New Form of Infectious Pneumonia;" and as the *post-mortem* as well as the clinical history of the case of W. B. corresponds very much with the symptoms mentioned in this paragraph, especially as to the great enlargement of the spleen, and the previous irritating bronchial cough. I will read it to you:—"At the recent Medical Congress in Italy, Professor Cantani presented a communication on a new form of infectious pneumonia which had been observed by him. The clinical history showed broncho-pneumonia, preceded by a diffuse bronchitis, with remittent and very pronounced fever; considerable emaciation, and a great enlargement of spleen. The disease was contagious, and was a primary affection of the bronchi, which extended downwards through the lungs, and sometimes over the pleura, and upwards along the trachea, and even to the larynx. Bacteriological examination revealed the presence of numerous diplococci, and especially streptococci, similar to those found in erysipelas. The pure culture did not, however, produce erysipelas when injected subcutaneously. When they were injected under the skin of a rabbit's ear, only swelling and reddening at the site of puncture were produced. All the cases ran a favourable course."

The points of difference here are: W. B. was not emaciated, but had he lived longer, no doubt he would have been; and apparently his disease was not contagious, or his young brother who slept with him on the Saturday preceding his death, and his fellow-assistant who shared the same bedroom, would have probably contracted the disease. But I have observed that diphtheria, typhoid fever, and septic pneumonia, are, judging from my own personal experience, only in a small degree contagious. Two or three in the same family not infrequently suffer from the same disease at the same time, or nearly at the same time, who have been exposed to the same cause; but the risk of contagion from actual contact is, I think, small. This disease may not infrequently spread rapidly if the cases are crowded together; a space of at least 2,000 or 3,000 cubic feet is probably necessary, or the recovery is at least retarded, and the atmosphere of the sick room may become contaminable and dangerous.

Such is the history of this somewhat sudden death. Have I too hastily assumed the cause was due to septic pneumonia? Might it not with equal accuracy, or even more scientific accuracy, have been due to typhus? Typhoid we are able to exclude from the probable cause, as *there was no peritonitis nor intestinal lesion*. How far had the condition of the heart and aorta any influence as an excitant cause of the pneumonic inflammation? On reflection I was led to give to the coroner septic pneumonia as the more probable *causa mortis*; pneumonia was undoubtedly proved, both by the *post-mortem* and the history of illness as given by the deceased's brother and fellow-assistant. Its septic origin I inferred from the *very large spleen*, and the large and swollen liver, and this opinion was confirmed by the two sources of infection to which he had been exposed, the bad drain and the sorting of probably infected clothing. As a candid observer, and with no wish to conceal facts that are contrary to my own view of thought, I should mention that Dr. Hirsch, Professor of Medicine in the University of Berlin, in his handbook of "Geographical and Historical Pathology," p. 161, gives as his opinion "that the existence of malarial pneumonia, or of a fibrinous inflammation of the lungs, is directly due

to the malarial poison, appear to be doubtful to say the least ;" but on the previous page he writes, " The conjecture that the primary infected pneumonia owe their origin to a variety of infectious matters, or in other words, that there are forms of infective pneumonia differing in their ætiology, cannot be summarily dismissed."

We learn from Dr. Watson Cheyne, p. 301, in the book published lately the new Sydenham Society on "Micro-parasites in Disease," that "Micrococci in the alveolar exudation of acute pneumonia is a constant factor, and that they are found in large numbers in the lymphatics of the affected lungs."

I will conclude this paper with a brief extract from the *Lancet*, of October 30th, 1886, which illustrates, very strikingly I think, the occasional septic origin of acute pneumonia.

UNUSUAL COINCIDENCE.

On the 18th of this month a man and his wife were admitted into St. Thomas' Hospital suffering from acute pneumonia of respectively three and four days' duration. Each was aged thirty-two years. The disease ran an acute course, being little influenced by treatment, and they died at the end of four days within a few hours of each other. At the *post-mortem* examinations, which were made on the same day, acute inflammation of the right lung was found in each ; this had attacked chiefly the base in the case of the man, and the apex in the woman. It would appear that they had left their house, and moved into lodgings only two or three days before the commencement of the disease, on account of the bad smells, making it probable that the disease was of septic origin.

Special Articles.

HEALTH RESORTS OF THE WORLD.

WOODHALL SPA.

THIS old and well-known spa, we are pleased to notice, is now deservedly attracting attention, and promises under the present management to form an important addition to the pleasant, well-conducted home health resorts we are anxious to encourage. Why send all our patients abroad when we have within easy reach such a wealth of health-giving waters at home in Great Britain? Woodhall, according to Dr. Charteris, is a strongly iodurated, bromine spa, with chlorides of calcium, magnesium, potassium, and carbonic acid. The baths are very efficacious in the treatment of chronic rheumatism and secondary syphilis. In some admirable papers in the *British Medical Journal*, Mr. Ernest Hart told us some of the reasons why patients went to Carlsbad, and also why Carlsbad was so attractive. Those who own the Carlsbad waters know their value, and they strive to attract visitors by the comfort and even luxury of the surroundings, by music, buildings, parties, reading rooms, etc.

Woodhall Spa has been in a measure neglected, but now we are assured all this is changed, and we are able to present our readers with an account of some of the improvements already started under the new management.

Barely nine months have elapsed since the present proprietors commenced active business operations. Since then the hotel has been entirely re-modelled, and throughout

beautifully furnished ; the stables which adjoined the hotel have been removed, and the gardens most pleasingly laid out by Mr. Dolby, of Boston, and the whole is now surrounded by a most charming park of seventy acres. We are almost at a loss to find words to describe the splendid new baths and pump-room, which have been completed this week. They are indeed pronounced the finest in Europe, and are fitted up with every modern appliance and convenience, including shower, vapour, douche, inhalation, and all kinds of local baths. Major Davis, F.S.A., of Bath, was the architect, and the Corporation of Bath authorized him to make a tour of all the principal baths in Europe some two years ago, before their own magnificent baths were erected ; so that the proprietors at Woodhall Spa have been most fortunate in obtaining the wide range experience of one of the leading specialists of the day. In the pump-room accommodation is provided for a first-class orchestral band, which during next season will play at stated intervals, when not required to play in the newly-erected band-stand outside the pump-room or new baths, the stand being almost a reproduction of the celebrated Kiosque in the South Kensington Gardens. Fine wide roads have been made upon the building estate, flanked on either side by trees. Several new villas have been erected, all of which are inhabited ; and thirty new shops will be completed in the course of the next few months, the whole of which, we believe, are either let already, or are in the course of being let. We understand that Messrs. Robey and Co., of Lincoln, are putting down new machinery for the elevation of the water, which, when completed, will deliver about 20,000 gallons a day ; and new tanks have also been constructed to hold some 60,000 gallons of water. An entirely new wing has been built to the hotel, which will be opened before the commencement of the season. The hotel is now leased to Mr. Roberts, of St. James' Hall, Piccadilly, whose catering gave such universal satisfaction during the past season. We understand that contracts have been signed for the erection of about twenty more villas, so that a still larger number of visitors will find accommodation. Plans of a new hospital have been prepared by Mr. Wheeler, of Boston, and in addition to the valuable site given by the present proprietors, subscriptions to the extent of £1,000 have been raised towards the carrying out of this most desirable object. We believe we are correct in stating that as soon as another £500 is forthcoming the proprietors intend to start the new building forthwith, as it is their earnest desire that both rich and poor should avail themselves of the benefits of this extraordinary Lincolnshire Spa. Remarkable as the success of last season proved,—for numbers of people were unable to gain any accommodation in the place,—we predict a still more brilliant season in the coming year. We trust that the Great Northern Railway Company will help the present proprietors of the Spa to the utmost of their ability, for at present nothing can be worse than the railway accommodation, both as regards the unpardonable delays at Kirkstead station and the station arrangements at Woodhall Spa itself. We cannot but wish the present proprietors all the success they so richly deserve, for when we think that Lincolnshire possesses an excellent water for the cure of gout, rheumatism and various other diseases, every credit is due to them for rescuing the Spa from comparative oblivion and making it more widely known, and, by their enterprise and energy, placing, within the reach of all, the benefits that are to be derived from the baths and water at Woodhall Spa.

WHITE LEAD MANUFACTURE.

BY A. W. WALLACE, M.D.

THROUGH the courtesy of Messrs. Fergusson and Co., we have had an opportunity of going over their White Lead and Paint Works at Mary Hill, Glasgow. The works are of recent erection and have abundant open space. The preliminary processes consist in removing the antimony and tin from the lead by melting it in quantities of twenty tons at a time, and skimming off the film which is formed, and which consists chiefly of the more easily oxidisable antimony and tin. The lead is run into ingots out of this furnace and is then placed in a succession of melting-pots, each holding about ten tons. After being melted it is kept stirred while cooling so as to allow the lead to crystalize. These crystals are removed from the rest of the lead; two thirds being taken away, and a third left behind. It is found that the silver which is mixed with the lead remains in the latter portion. The process is repeated till an alloy of over 400 ounces of silver to the ton of lead is obtained. The silver is then separated by cupellation. The pure lead is cast into plates about a foot long, and four inches wide, for the purpose of being converted into white lead. The following is the process:—A layer of spent tan is laid on the floor of a room twenty feet by twelve feet in area, and sixteen feet high; on this are placed rows of earthenware pots of two sizes, the rows of each size being alternate. These pots are all filled with dilute acetic acid. A plate of lead is folded up and placed in each of the larger pots, and over all the pots is placed a layer of the sheets of lead placed edgeways. Boards are laid for the workers to walk upon while arranging the lead over the pots. Over the lead is placed a layer of spent tan. On it rows of pots and a layer of lead, and so on, tan pots and lead in succession, till the room is filled. Chemical action takes place; some heat is generated, and at the end of three months the lead is all converted into carbonate. The room is then opened from the top, the plates of carbonate taken out, and crushed between rollers along with water. The bits of lead which have not been converted into carbonate are picked out, and the magma of white lead and water runs down into a settling tank. It is next put into bowls, and placed in a drying oven. At the end of a week it is dry. The bowls are then removed on an endless band, and hoisted to an upper storey, where the grinding and mixing with oil begins. The first process is to throw it into a copper in which a mixer is working. Some dust is given off when it is thrown in, but this is carried off by a fan working overhead. It then passes through rollers, by which it is incorporated with the oil, and is then either packed as white lead, or mixed with other colours for the market.

Almost all the work in making the white lead is done by young women. There are over thirty of them employed. The following are the precautions employed:—Each woman wears a linen overall while at work, which is washed every day on the premises. They come to work at half-past six; a breakfast of porridge is provided for them at nine o'clock by the firm, the workers providing their own milk. Their work is finished at two, and they have generally one day of the week free. Most of the girls are bare-footed—a common Scotch custom—and they are required to wash their hands and feet, and brush their teeth in the lavatory before breakfast, and before leaving the works. Once a week they have a hot bath, and a dose of Epsom salts and sulphuric acid. They wear respirators if engaged in any work producing dust. The most

dangerous operation is emptying the drying stoves, but this only occurs once a week, and the same girls are not employed twice in succession, and are removed in rotation to healthy departments. The result of this care is most satisfactory. The girls all look healthy, and many of them are rosy, in fact their appearance is very much above that of average factory hands. We saw women who had been from eight to fourteen years in the works who were perfectly healthy. The manager, to whose courtesy we are indebted for this interesting information, mentioned a singular fact, that some constitutions seem much more susceptible to the action of lead than others. Persons so predisposed became affected in a few weeks. When this happens, they are employed in another department till they get well, and then they are dismissed as unfit for the occupation. A small quantity of arsenical paint is also manufactured. Formerly the workmen suffered from eczema, but now the arsenical solution is boiled under a ventilator, and is stirred by a mechanical contrivance which admits of the workman operating at a safe distance from the fumes. The result is that skin affections have disappeared. We understand that the Government Inspector considers this the best arranged lead works in the United Kingdom. The proprietors have conclusively shewn that it is possible by attention to sanitary laws, and the employment of a manager who has the welfare of the employees at heart, to make a very dangerous occupation considerably more healthy than ordinary manufacture conducted in neglect of sanitation, and the grand lesson of it is that more real success will attend the scientific and moral education of employers and managers, than the multiply of legal enactments. All factories are under Government inspection, but enlightened and conscientious employers have done more for a dangerous occupation than Government inspection has been able to do with ordinary ones where sense and conscience are wanting in the owners. We by no means, however, intend to imply that Government inspection should be relaxed. Law is made for the lawless, and we believe there are lead works which are conducted with such reckless neglect of the welfare of the employees, that the proper course would be to indict the owners for manslaughter whenever a death from lead-poisoning takes place.

MONTHLY REPORT ON NEW PREPARATIONS,
FOODS, DRUGS, INVENTIONS, ETC.

Bingley's Sugar-free Ginger Ale.—There are many people who find that sugar produces acidity, and of course diabetics must avoid it in every form. Saccharine has been welcomed as a substitute for sugar, and Messrs. J. Bingley, of Northampton, have already adopted it in the manufacture of ginger ale, and with very great success. A sample of their manufacture has been submitted to us. We let some friends taste it without telling them how it was flavoured. They declared it to be the best they ever tasted. It is certainly excellent. We have seen it stated that the taste of saccharine persists in the mouth for some hours after being taken. This does not occur at all events as a result of drinking this ginger ale. The taste cannot be distinguished from sugar either at the time or afterwards. Messrs. Bingley prepare ginger ale of four different grades of sweetness. The lowest is half the sweetness of the sweetest, and the other two divide the interval, so that provision is made for a variety of taste. There are wonderful differences in quality, even in such an apparently simple a beverage as "ginger-pop." Those who buy Bingley's will not be disappointed in the article.

Clinical Cases.

ROYAL ALBERT EDWARD INFIRMARY, WIGAN.

Under the care of Mr. William Berry.

CASE I.—OVARIAN TUMOUR—OPERATION—RECOVERY.

By A. B. LIPTRON, M.R.C.S. ENG., L.R.C.P. EDIN.,

JUNIOR HOUSE SURGEON.

E. F., aged 38 years, admitted November 19th, 1884.

Family History.—Patient has had eight brothers and two sisters, of whom six brothers are dead from causes unknown, and one sister from cancer.

Previous History.—Has been married nineteen years. Never had any children—four miscarriages, all about the third month; the first six months after marriage, the second four months after, and the last about twelve years ago. Has always menstruated regularly every three weeks, but latterly has not seen so much. Says she first noticed a swelling above the pubes two and a half years ago. This was not more on the one side than the other. Her attention was called to this by a difficulty in micturition; since then she has been troubled with this at frequent intervals. Some time after, vomiting came on periodically every three weeks, and lasted a whole night. Never had much pain. Bowels constipated. Had to take purgatives regularly.

Present Condition.—Seems a fairly healthy woman—rather pale, but well nourished. Heart and lungs normal. Digestion good. Abdomen swollen. Girth at umbilicus thirty-eight inches. Shape typical of ovarian cyst; bulging anteriorly, not laterally; resonant in flank; dulness anteriorly. Contour somewhat irregular, with indefinite fluctuation. Thrill not communicated through whole mass, but only through portions. *Per vaginam*:—Uterus markedly antverted and fixed to some extent, cervix short, os nearly obliterated and very high. Uterus seems larger than usual. Sound cannot be passed on account of displacement and smallness of os. Bimanually uterus seems to be slightly attached to the tumour. On puncture of tumour with a subcutaneous syringe a clear viscid fluid was obtained, which was not examined under microscope. On a puncture being made next day a little external to the previous one, a dark-red gelatinous fluid was obtained, which, under the microscope, showed a large number of granules, "ovarian cells," as well as leucocytes, red blood corpuscles, and a number of large compound granular cells. Urine clear; sp. gr. 1032. No albumen; no sugar.

November 27th. Operation performed, few adhesions being met with. Pedicle was ligatured with silk and returned into the abdomen, and a glass drainage tube was inserted. Morphia suppository.

November 28th. Temp. 98.4°; evening, 99°. Dressing comfortable. Urine drawn off every six hours.

December 1st. Temp. normal—normal up to to-day. Fluid slightly bloody, drawn off every morning, and patient made comfortable. Temp. 100°; night, 103°. About three ounces of blood removed with syringe.

December 2nd. Patient comfortable. Temp., morning, 101°; evening, 103°.

December 3rd. Temp., morning, 101.2°; evening, 103°. About two ounces of fluid removed.

December 4th. Temp., morning, 101°; evening, 103°. Wound looks swollen and somewhat brawny between the stitches. Patient seems well.

December 5th. Temp., morning, 100°; evening, 102°.

About four ounces of fluid removed. Wound seems inclined to suppurate on stitch removed.

December 7th. Wound looks better, but still pus oozed out on pressure. Temp. 99°; evening, 100°. She progressed and wound slowly healed. It was evident that the peritoneum was closed excepting where drainage tube was inserted, and that there was suppuration between the muscles of the abdomen. Pus was pressed out every day. Iodoform powder dusted over. She gradually recovered, and was discharged cured on March 9th, 1885.

CASE II.—OVARIAN TUMOUR—SUPPURATION—INFLAMMATORY MISCHIEF FOLLOWING INTRODUCTION OF ASPIRATING NEEDLE—DEATH—AUTOPSY.

By J. BUCHANAN, M.B., C.M. GLAS.

SENIOR HOUSE SURGEON.

E. C., an out-patient, aged fifty-four, married, was first seen in December, 1884, complaining of gastric symptoms, constipation, pain in the back, and frequent micturition. She was relieved for a time, and ceased to attend the out-patient department. In April, 1885, she states that the last few months she has increased very much in size, and has a return of her old symptoms. She ceased to menstruate at the age of forty-seven, and has had a large family. Family history cannot be obtained. She herself has always been strong, and has had good health. Admitted as an in-patient on May 2nd, 1885.

Present Condition.—Abdomen much distended, principally on right side. Two distinct lobes or parts of same tumour could be made out. The one to the right the larger and more prominent of the two, with a sulcus running across the abdomen in an oblique direction under the umbilicus. Percussion over tumour dull, but resonant in flanks. *Per vaginam*:—Uterus anteflexed and somewhat flexed. Sound passes in three inches; behind and to the left some hard immovable nodules could be felt. No discharge at present from the vagina, but patient states that she has had some discharge every two or three weeks for the last three or four months. Urine contained a small quantity of albumen. On the 15th May she measured, over umbilicus, thirty-five inches. She vomits a good deal, and complains of pains in the back and loins. She was treated with stomachics and rest for some days, and put on a bland diet. A consultation was held, and as there was some doubt about the tumour, owing to its firmness, a small aspirating needle was introduced, and the syringe applied, but no fluid was obtained.

May 17th. She became severely ill. Pain in umbilical region very great. Temp. 102.2°; pulse 130. Girth thirty-nine inches. Sedatives were given, and also hypodermic injections to relieve pain.

May 18th. A good deal of sickness. Temp. 102.4°. Bismuth mixture ordered, and hypodermic injections.

May 19th. Patient a little relieved. Tongue dry, brown, and red at the edges. She is at times semi-delirious.

May 20th. She is a little better and more conscious. Still a good deal of pain, and much tenderness on pressure. Treatment continued.

May 24th. All the symptoms recurred with increased severity. Temp. 103.4°. She gradually got worse, and sank on May 26th.

Post-mortem examination was limited to examining the abdomen thirty-six hours after death. On opening the wall of the abdomen a large firm multilocular cyst was found growing from the left ovary. One of the small cysts was suppurating, and at least ten ounces of pus

escaped. There was very little evidence of any peritonitis, but it was quite evident that the suppuration had caused the pain and exhaustion.

Remarks by Mr. Berry.—In Case I. we had the peritoneum very soon united, and after its closure some suppuration in the sheath of the rectus muscle. Beyond this there was nothing special. In Case II., however, it was evident that after aspirating we should have performed abdominal section. Even if we had not done so then, it would have been well after the severe pain set in; but owing to there being a doubt as to the nature of the tumour it was unfortunately omitted. It was, however, very evident that if the abdomen had been opened the tumour could have been easily removed, and probably we should have had a successful ovariectomy.

Reviews.

Home Education, or Irish versus English Grammar Schools for Irish Boys. By MAURICE C. HIME, M.A., LL.D. London: Simpkin, Marshall & Co. Dublin: Sullivan Brothers.

A WRITER in the *Quarterly Review*, 1845, vol. 76, page 355, in a review of George Petrie's work, "The Round Towers of Ireland," tells us that there "was a time when Ireland was the light of the world, and that while knowledge, philosophy, and art were dying away in other countries, the light was kept burning there, and then spread over the greater part of Europe. Saxon kings, among them an Alfred, came to be educated in Ireland." Learning has, we believe, ever been esteemed in Ireland, and we are pleased to think at the present day the Irish schools keep up the national traditions, and that boys can be as well educated there as in England. We are already endorsing the opinion of Dr. Hime, who has written this book to check the exodus of Irish boys to English schools, and who, after a large experience as head master of Foyle College, Londonderry, is well qualified to treat on a subject of this nature. Though not a nationalist, he protests against the fashion of sending boys to English schools, so that they may acquire an English accent, etc.; and he proves conclusively that the peculiarity which distinguishes the Irish accent is not a bar to fame and fortune. Hundreds of Irish churchmen, dignitaries, statesmen, lawyers, doctors, artists, soldiers, scholars, and the rest, educated exclusively in Ireland, have achieved fame, even though they possessed the national peculiarity. Dr. Hime shows that 90.4 per cent. of distinguished living Irishmen were educated exclusively in Ireland; he gives the names and positions of a large number of them, and he draws from this the conclusion that as it has been possible for these men to win high positions in so many varied callings after home education, so boys of the present day need not fear that home education will be prejudicial to their advancement in after life. It is an economic question seriously affecting Ireland, if it be true that 1500 boys annually cross over to English Schools, for assuming that each boy costs £100 we have an aggregate sum of £150,000 lost to Irish schools. If as good an education can be obtained in Ireland as can be done in England, and at as reasonable a price, we cannot but regard it as foolish on the part of Irish parents to send their children away for the sake of fashion. Dr. Hime very eloquently concludes: "If one's son becomes as successful a politician as Lord Ashbourne, or Sir Charles Russell, Q.C., M.P.; as able a lawyer as the Right Hon. W. Gibson, Q.C., M.P.;

Hugh Holmes, Q.C., M.P.; or Mr. Digby Seymour, Q.C.; as brave and accomplished a soldier as Lord Wolseley; as deeply read a theologian as Dr. Gwynn, or Dr. Salmon; as lucid and eloquent a preacher as the Bishop of Peterborough, or Dr. Forrest, or Dr. Littledale; as wise and astute a judge as the Master of the Rolls, Chief Baron Palles, Sir J. C. Matthew, or Lord Justice Fitzgibbon; as profound a mathematician as Sir Andrew Hart, Professor Burnside, Professor Casey, Dr. Salmon, Mrs. Williamson, or the Provost; as sound and tasteful a classic as Professor Tyrrell, Professor Crossley, or Mr. Bury; as respected a philologist politico-economist as Dr. Ingram; as thoughtful and learned a metaphysician as Professor Maguire, or Mr. Abbott; as subtle a logician as Mr. Monck; as much imbued with the true spirit of poetry as Professor Armstrong; as versed in English literature as Professor Dowden; as charming a musician as Dr. Villiers Stanford, or Sir Robert Stewart; as admirable a painter as Sir Frederick Burton, or Sir Thomas Jones; as estimable a statesman as Lord Monck; as judicious a law lord as Lord Fitzgerald; as brilliant a physicist as Professor Tyndall; as eminent an analyst as Sir Charles Cameron; as great a physician as Dr. Quain; as skilful a surgeon as Sir William MacCormac, Sir George Porter, or Sir William Stokes; as prosperous and benevolent a merchant as Sir Edward Cecil Guinness; as gifted and spirited a war correspondent as Dr. W. H. Russell; as versatile a dramatist as Mr. W. G. Wills; as famous a financier as Sir Robert Hart; as expert and original a geologist as Professor Hull; as world-renowned a telescope optician as the talented and ingenious Mr. Grubb; as experienced and authoritative an engineer as Professor Crawford, Mr. Manning, Mr. Barton, or Mr. James Price; as capable and enlightened as Mr. Drew; as courageous and useful a civil servant as Sir Robert Montgomery; if one's son become as distinguished as any of these, and they were all educated exclusively in Ireland, then assuredly his parents may well, and they probably will, regard with perfect equanimity whatever manners or accent, be they ever so "Irish," he may happen to have."

Dr. Hime may be accused of being too severe on English schools, but he is supported by Englishmen. The *Educational Times*, February 1st, says in reference to the work, "Cræsus Minor."

"There can be no doubt, as Mr. Pember shows in every chapter, that the ordinary methods of education are wasteful and inefficient, and that the enormous sums spent by many parents yield no adequate return: boys become extravagant, conceited and exclusive, with no high aim in life, with a contempt for honest toil, and very little sympathy with the poor. Of course, as is pointed out, much of the indictment must be laid against the parents, who infuse their own spirit into the children, but a great deal is also due to the pernicious atmosphere of many preparatory schools. Summing up the bad results of much of our so-called education, Mr. Pember says, like a Ruskinian censor, 'As the workman stands, pipe in mouth, opposite the Criterion or the gilded buffets in London, and sees the young men, who ought to be the guardians of the State, who are called the aristocracy, who have been for twenty-one years the recipients of a costly education, impotent to govern their own passions, vulgar, reckless, extravagant—do you wonder if he asks, 'To what purpose was this waste!' and, having asked, adds, 'How long?'"

Syphilis. By JONATHAN HUTCHINSON, F.R.S. (illustrated). pp. 532. London: Cassell & Co., Limited.

FOR years Mr. Hutchinson has been writing on syphilis, showing the many sided nature of his medical accomplishments, and Messrs. Cassell were fortunate in securing his pen to write a manual suitable for practitioners and students of medicine. In these pages we have, if not all that is text of his writings, at least his matured views on the many important questions that arise in connection with syphilis, and as he has given us facts, notes from practice,

to illustrate his views, we are placed in the most favourable condition to estimate the value of his conclusions. The work is divided into two parts, the first dealing with general statements, as primary symptoms, secondary symptoms, intermediate symptoms, tertiary symptoms, treatment of syphilis in general, on congenital syphilis, and the laws of inheritances. The second part consists of clinical commentaries and illustrative cases. The phenomena of syphilis, alluding to Mr. Hutchinson, result from the introduction into the system of a specific poison, and this poison, in all probability, consists of particulate (or organic elements). This is a framed definition, but it is more positively stated that the disease depends on a living and specific microbe, and this microbe may be introduced on the lips, fingers, etc., as well as by coitus. The treatment of chancres is of importance, and here Mr. Hutchinson lays down a positive dictum, "If a patient who has never suffered from syphilis before, and who can give his dates correctly, comes under observation at any period within a fortnight of contagion, with a single sore, it will certainly be wise to destroy it utterly." For this purpose he recommends fuming nitric acid or the cauter, For many sores he advises free washing and the application of iodoform, as one drachm of iodoform to one ounce of vaseline in non-indurated sores, this being especially effective. "It may be asserted," he says, "that the introduction of iodoform has rendered the treatment of non-indurated sores a very easy matter. The same remark applies to the suppurating stage of true chancre." A very optimistic view. On the general treatment of syphilis our author is a believer in mercury. "In the early stages of syphilis the iodide of potassium is comparatively powerless, and mercury should be used. Thus the induration of a primary sore will resist the influence of the former, but melts away when mercury is given. So also of the secondary phenomena, all of which, excepting perhaps sore throats and sores in the mouth, are best treated by mercury." The various methods of giving mercury are described, the writer praising the use of the ordinary grey powder. One of the most important questions, and one frequently asked, is, "When may a patient marry who has had an indurated chancre?" We believe that Mr. Hutchinson's limit may be practically accepted—viz., two years, that is to say, if the patient has undergone a carefully adjusted course of treatment of not less than six months. The second part of the book is, in our opinion, the most interesting; put in the form of commentaries, and with details of cases that have come under the author's notice, it is sure to be instructive. He here runs over the most divers questions, falling back on his own experiences for answers, and though there is no method in his arrangement of the material in this part of the book, this is counterbalanced by the wealth and illustrations afforded by clinical cases, and by the very conversational style in which the questions are put. Syphilis forms such an important and common part of practice, that the general practitioner should be well posted up on it. This work of Mr. Hutchinson is admirably suited to the needs of general practice.

BETA.

On Hemorrhages and False Membranes within the Cerebral Subdural Space, occurring in the Insane (including the so-called Pachymeningitis). By JOSEPH WIGLESWORTH, M.D. Lond. An Essay to which the Prize of the Medico-Psychological Association has been awarded.

IN our present imperfect knowledge of the pathology of diseased mental states, we welcome any contribution that throws light on the anatomical changes that underlie or

accompany them. The existence of false membranes on the inner surface of the dura mater in cases of insanity has long been recognised as of frequent occurrence, and has generally been ascribed to chronic inflammation. Writers are, however, not agreed as to the origin of the appearances found, and Dr. Wilesworth has undertaken a series of observations in regard to it, the result of which is contained in the present pamphlet. Out of 400 *post-mortems* on cases of insanity, either false membrane or blood was present in forty-two, the two conditions occurred in the same class of cases, and passed by insensible gradations into each other. Patients that during life had symptoms of cerebral hæmorrhage and recovered, were found, after death some months later, to present the membrane usually ascribed to pachymeningitis. From these considerations, as well as from the absence of marked signs of inflammation, and the frequent limitation of the affection to one side, Dr. Wilesworth concludes that the appearances attributed to pachymeningitis are in reality due to previous hæmorrhage and are not the result of inflammation at all. The hæmorrhage he considers as being to a great extent compensatory to the shrinking of the convolutions, and brought about by loss of support of the vessels of the pia mater and the occurrence of local congestion of the meninges. The former factor seems likely to operate in general paralysis, in which the condition under consideration is most frequently found, but we cannot agree with the writer in supposing that small effusions of blood may take place by diapedesis without any breach of the continuity of the vessels. This however does not affect the main argument, and we congratulate the writer on having made a solid contribution to our stock of pathological knowledge, founded on an extensive experience and worked out by a careful induction.

T. R. BRADSHAW, M.D.

Short Notices.

Ophthalmic Surgery. By ROBERT BRUDENELL CARTER, F.R.C.S., and WILLIAM ADAMS FROST, F.R.C.S., with ninety-one engravings. London: Cassell & Co.

Books published under a joint authorship are not usually satisfactory. In this book we have, however, chapters written by the two authors and signed by their initials, so that an individual responsibility is assumed, and we are assured that both authors are in general agreement on all the portions of the work. Mr. Brudenell Carter has contributed the articles on the anatomy and physiology of the eye, the examination of the eye, affections of the cornea, and the anterior zone of the sclera, diseases of the iris, the lenticular system, glaucoma, optic disc, retina, choroid, and posterior half of sclera, amblyopia, and amaurosis. Mr. Frost treats of affections of the eyelids, lachrymal apparatus and conjunctiva, affections of the vitreous, color vision and its defects, injuries, errors of refraction, affections of the ocular muscles, and affections of the orbit. It is only possible in 540 pages to present a very concise account on the present state of ophthalmic surgery, and the authors are to be congratulated on the way they have presented it, and on placing at the disposal of the practitioner a useful work on a branch of practice too much neglected. Amongst the chapters, those on the examination of the eye, on errors of refraction, and colour, vision will be found most serviceable. There is really too much haphazard prescriptions of spectacles, and much harm done by cheap and unsuitable glasses. We can confidently recommend the book as an excellent addition to the series of manuals now in course of publication by Messrs. Cassell & Co.

L. R.

The Provincial Medical Journal,

MARCH, 1888.

THAT to do any good, medicine must be "mixed with brains," is a fact that needs to be burnt into the minds of not a few, especially of working men. When it is decided to accept the lowest tender for any article of commerce, the analyst can be appealed to in order to secure that the article delivered is "up to sample;" but no provident dispensary can secure a sample of its physician's skill whereby to test the quality of the service he afterwards supplies, nor can the most subtle analysis determine whether the best quality of thought is being given to the case in hand. The patient is helpless in the hands of his medical adviser. He has absolutely no security but the conscientiousness of the physician whether he shall be supplied with the reality of sound advice, or the sham of learned talk. By a fair amount of dexterous assumption, and some skilful "prophesying after the event," he can always shew that patients who die do so because they must, and those who get well owe their lives to the physician's skill. Working men may think that they have "done the doctor" by the low terms on which they get him to work, but it is in the same sense in which the man said "he had done the insurance company" because he was dying of pneumonia. Let us see now whether the provident dispensary system has a very sound foundation to rest on. Take two hundred families in a manufacturing town. This will represent a thousand people. There will be thirty-five to forty births among them; twenty-five to thirty deaths if they belong to the artisan class. There are about twenty-five cases of illness for every death, so that there will be at least 3,000 cases requiring advice during the year. The average duration of illness has been found to be a fortnight. If but three visits at an average are made to each case, that is 9,000 per annum, or 25 per day; but as illness is very unequally distributed over the year, in a sickly season the visits will run up to fifty or sixty per day. This with thirty or forty midwifery cases is pretty good work for any man. Let us see now how it stands as to pay. £400 a year is the least for which it can be expected such work would be well done, and medicines supplied. Allow £40 to be got in fees for midwifery, then £360 must be distributed over 1000 people; that is, each must pay about seven shillings per annum. Will the working classes pay this sum? We fear not, for though not very much, certainly, if all were earning, when a working man has "ten small children" with himself and his wife, the annual rate is £4 4s.; a very serious matter indeed for a man with small wages. There is another serious difficulty. A man in the prime of life is liable to less than a week's illness in the year; one between fifty-five and sixty to over three weeks; young children to quite as much. Viewed from a commercial standpoint, the vigorous man will decidedly object to pay the same rate as the man more liable to sickness, and yet he is the best able to afford it. These are objections which appear to us to make it impos-

sible ever to establish provident dispensaries on a sound commercial basis, just to the medical attendant, as well as to the working classes. If the rates are such as to secure proper medical advice, they will be beyond the reach of the very class for whose benefit they are intended. There are two ways in which these difficulties may be overcome. First by the individual practitioner; next by organisation. The medical man should keep his fees for single visits and short attendances well up, and then, as an act of kindness, and not as a right to be demanded, he can lessen the charge per visit where the attendance is long and the circumstances of the family straitened. Medical men should agree to a tariff of first fees—that amount or none. But no conscientious physician could bind himself in every case to exact his pound of flesh during a long attendance. Next as to co-operation. The only sound principle on which this can be done is that the strong shall help the weak. This principle is not a commercial one. But there are more things in heaven, and in earth as well, that are not dreamed of in some men's philosophy. Altruism is not dead yet. The love of one's neighbour is still a survival. That the best helpers of the very poor are found among those just a step raised above them, in straitness, is a great fact which political economists have never realized. A dispensary supported by the pence and farthings of labouring men, in the management of which they share, and which has for its object the relief of sickness, because the sufferer is a brother in need, and not because he is a subscriber, is the true solution of the question. In such a case there is no sacrifice of dignity in the physicians and surgeons accepting a lower rate of remuneration than under other circumstances they would take. But the emolument should be fixed, and no room given for "putting in a tender." Further, every case seeking relief should be subjected to strict scrutiny, yet with that delicacy which will not interfere with the self-respect of the deserving recipient. It is truly said that the present indiscriminate system of medical charity is demoralizing the working classes. The only way to mend matters is to associate the working classes as intelligent helpers in the relief of real distress. We shall return to the subject soon, and prove from facts that our contention is no mere theory, and in the meantime we repeat our protest against the provident dispensary system as false in principle, and mischievous alike to those who give and those who take.

THOSE who may have seen our book on "Rabies or Hydrophobia," may have been struck by the conclusions we arrived at in 1877 on the pathology of hydrophobia. We then said: "We may fearlessly propound the following provisional conclusions:—

1. That the phenomena of rabies, as evinced by morbid anatomy, depend on structural alterations in the medulla, oblongata, and spinal cord, *influenced by a specific virus, the modus operandi of which is yet involved in obscurity.*"

This paragraph stands as true to-day as when it was

written. The subsequent researches of Dr. DUBOUE, of Pau (1879), and of M. PASTEUR have confirmed the accuracy of our provisional conclusions so far as the location of the virus in the medulla and spinal cord, but, unfortunately, the second part of our conclusions yet remains *in statu quo*, and the nature and mode of action of the virus are not known. In all we have written on M. PASTEUR's work, we recognised how far he had gone on new lines, and what we owe to him; and in our pamphlet we clearly pointed this out. We drew, however, the line, differentiating between his experiments on animals and his experiments on men. The application, under other conditions and other methods, of a system which succeeded with one class of animals, was not logical. We need not go over the old ground. Briefly stated, analogy is not identity. We now allude to the subject again to draw attention to the observations of Dr. KLEIN, which so singularly coincide with all we have written, and which, coming from an independent source, and from one well justified to speak, will have more weight than anything we could say. At a recent meeting of the Epidemiological Society, Dr. KLEIN read a paper on "Some of the Infectious Diseases common to Man and the Lower Animals."

In the course of his address Dr. KLEIN said: "The subject of hydrophobia has, by the teaching of PASTEUR, received important additions. His long and arduous labours, carried on for several years, and confirmed by many independent workers, have established, beyond doubt, the following facts:

(a) The fresh brain and cord of an animal or man affected with the disease contain the virus of rabies in an active form.

(b) The intracranial injection of such virus is followed by the disease with certainty after an incubation varying in duration in the different species.

(c) Drying the cord or brain diminishes its virulence; this shows itself by a delayed incubation, and by a modification of the character of the disease, inasmuch as it gives place to "paralytic" or "dumb rabies." If the process of drying is carried sufficiently far, but not too far, no rabic disease, but an immunity against rabies is produced by inoculation with the fresh material.

(d) The inoculation with virulent matter (natural or experimental), simultaneously with, or followed by that of attenuated virus of the proper degree, is not followed by the outbreak of the disease, hence it is possible to overcome the action of the virulent poison.

(e) The disease is also, but unreliably, produced by subcutaneous inoculation of cord and brain matter; as also, but still more unreliably, by the saliva.

From these facts PASTEUR has drawn certain conclusions, which, if established, would give a means, not only to stamp out rabies amongst dogs, but also prevent rabies in man; for it must be obvious that by subjecting all dogs to inoculation with attenuated virus, no rabies dangerous to man could develop in them; and further, by inoculating human beings bitten by a rabid animal with attenuated virus, the disease would be prevented. These conclusions, though

fully justified, cannot however be considered as fully established. Their applications to the human subject are far from understood. (a) *In the first place, the method of inoculation, as practised by M. PASTEUR on the human subject, i.e. subcutaneous inoculation—intracranial injection not having been, and is for obvious reasons not likely to be, employed—is not sure of success, if as a basis for such a proceeding the knowledge gained by animal experiments is to be relied upon.* For in the series of experiments made by Von FRISCH in Vienna, and by Mr. DOWDESWELL at the Brown Institution, it is clear that the results in the rabbit or the dog are altogether dissimilar; for whereas in the latter species this method did lead to protective inoculation in some animals, in the first species—i.e., the rabbit—it produced true rabies. M. PASTEUR's *protective inoculation in man also led, in a certain percentage of cases, to fatal results.*

(b) Secondly, the question of the degree of attenuation the cord undergoes by drying, although established for the rabbit's cord, is not established as far as its application to the human subject is concerned. PASTEUR's and others' method of using the cord of rabid rabbits in successive degrees of attenuation—starting with the use of a higher, and proceeding to that of a lesser degree of attenuation, either slowly or rapidly (intensive treatment)—is tentative; and for this method no firm and clear basis is as yet available, since no one knows what is the minimum and what is the maximum degree of attenuation of rabbit's cord *quoad hominem*.

(b) *Another uncertain factor in the application to man of the protective inoculation is the fact that the incubation-period of rabies in man exhibits such a conspicuous difference in the different cases. As is well known, persons bitten by rabid dogs and seized with hydrophobia show a wide range of incubation-period. If, as PASTEUR assumes, from his animal experiments, a difference in incubation-period indicates a different degree of virulence of the rabic poison, then no assumed degree of attenuated virus could rationally be recommended for protective inoculation, since the duration of the incubation-period, in a given human case, is obviously a matter of conjecture.*

(d) But above all, *the intimate nature of the rabic virus being as yet not known, no definite and conclusive insight into its modus operandi is available.* Various observers have described organisms as being the cause of rabies, such as those described by FÖL; but there is really no definite proof forthcoming. Mr. DOWDESWELL has seen masses of micrococci in and around the central canal of the cord in a rabid dog, but has missed them in other cases. Quite recently a Russian observer described bacilli as the cause of rabies; but from his experiments it is quite clear that the microbe of rabies remains to be discovered. When this is done, and not until then, definite and clear proof will no doubt be obtained on some of the most essential points of the problem."

If we compare the general statements in our pamphlet with those above, it will be seen how close we are in agreement in our estimation of the method PASTEUR. Hydrophobia has

not yet been brought under control, but as we have so often said, "We hope we are on the high road to success, and by persevering we shall yet overcome it."

IN *Der Fortschritt*, Dr. Wyss has given a very able summary of some modern views on the treatment of phthisis. If we examine his data we shall be forced to the conclusion that we are still groping in the dark, and that the therapeutics of to-day are not much more advanced than they were before the bacillus tuberculosis was discovered. The treatment of phthisis, says Dr. Wyss, is viewed from two different points. In the first the pathogenic agent, the bacillus, is attacked directly; in the second the system is strengthened, so as to resist the bacillus. The two methods are employed simultaneously. It is convenient to consider the methods separately.

1. *Bactericides*.—(a) Anti-tuberculosis vaccination, after the method of attenuation by PASTEUR, has been tried by CAVAGNI, but his experiments have not yet broken from the limits of the laboratory; but as NAUNYN, of Leipzig, observes, there is ground to hope that a true preventive vaccine will be found. VERNEUIL in 1886 proposed the establishment of a prize to encourage research in this direction.

(b) *Bacterio-therapia*.—An ingenious Italian suggested the inhalation of cultures of harmless bacteria, which would devour the destroying bacillus. Professor CANTANI was the promotor of this system. [An enterprising English practitioner took this up, and in a handbill submitted to us, we saw the grave announcement, that he was prepared, for a fee of £2 zs., to supply pure bacteria for inhalation. This system soon died.]

(c) *Anti-Bacterian Medication*.—The chemical substances which have the reputation of killing the bacilli, owe their prominence to clinical empiricism rather than to experimental research. They owe their inception to the antiseptic theory. In support of this system we find the names of METSCHNIKOFF, WYSSOKOWITCH, BRIGER, and others. BUCHNER, basing his method on this idea, suggested a powerful remedy.

1. *Arsenious Acid*.—The employment of arsenious acid dates back to Roman times. PLINY and DIOSCORIDES cured cases of phthisis by "sandrake," a substance compounded of sulphuret of arsenic; thrown on hot cinders, it gave off vapours, which the patients inhaled. In spite of the recommendations of SLEVOZT (Izod) arsenical preparations were rarely employed. It is to the celebrated clinician, TROUSSEAU, the merit of their re-introduction is due. TROUSSEAU found in "DIOSCORIDES" the following:—"We give arsenic internally to patients who have pus in the chest; mixed with honey, it renders the voice clear, and we give it to asthmatics, and for patients who have invertebrate cough it is respired." TROUSSEAU caused cigarettes to be made, each containing five to ten centigrammes of arsenate of soda, giving internally pilules made of two to five milligrammes of arsenious

acid. Relief was obtained in some of the most distressing symptoms. According to BINZ and SCHULZ, arsenious acid acts on the cellular protoplasm, which undergoes molecular transformation, more or less intense. Thus modified in its internal constitution, the cellule engages in a struggle with the bacterium; in place of allowing itself to be destroyed, it becomes the tomb of the vanquished enemy. BUCHNER has in Germany recommended this agent, though it has not met with general acceptance.

2. *Creasote*.—Discovered in 1832 by REIEBENBACH, creasote has been employed by numerous foreign observers, but it has not found much general support.

3. *Menthol*.—Drs. ALBERT and ROSENBERG, relying on the antiseptic properties of this stereoptine, have recommended it in phthisis, either in the form of inhalations, or pilules, or cachets. LAAGAARD gives the following formula:

Mentholi	2.0
Sacch. albi	
Gummi arabi	āā 1.0
Aquæ destill.....	qs.

ut. ft. pil No 20. Obdue gelatina. Each pill contains 0.10 menthol.

3. *Rectal Gaseous Injections*.—BERGEON's method has been much praised by some writers, but the accumulating evidence is not favourable to it. He proposed to bring the curative agent into direct contact with the microbes, without hurting the organism. This he proposed to do by gaseous injections by the rectum. BERGEON found that a mixture of carbonic acid and sulphureted hydrogen was tolerated in the rectum when these two gases were pure, and deprived of atmospheric air. The mineral waters of D'Eaux-Bonnes were used. The sulphureted hydrogen was the agent designed to kill the microbes. The climax of treatment, we believe, has been here reached; the absurdity has been emphasized by the suggestion made, half in fun and half in earnest, by an American contemporary, that phthisical patients should eat *beans*. Looking at the treatment of phthisis in modern times, we are reluctantly forced to the conclusion that we have not made any advance, and that we must fall back upon the general principles of treatment which have been clearly advocated by physicians who regarded consumption from its clinical side, and from the standpoint of observation and experience.

DR. E. M. BRILL, of New York, makes rather a sweeping charge against medical experts in the paper he read before the Section on Medical Jurisprudence at the 38th Annual Meeting of the American Medical Association. He rather insinuates that railway doctors look through railway spectacles, and that the expert called in by the persons suing the railway company also looks through spectacles coloured by the fee received from the side on which he is summoned. We think his picture overdrawn. He says: "Were all actuated by the desire that truth should prevail, and with no regard to the condition of their pockets, there would be in the great majority of litigations but one expressed opinion. How can a fact be anything else than a fact? and how can

the significance of a certain regular combination of signs or symptoms be considered in any other than their true significance?" He answers this question himself by the following case. He says: "There is a well-known case described by LEYDEN of spinal concussion caused by a railway accident, in which the patient's sufferings at the time were but trifling, and he not improving, and becoming unable to work, was mistaken for a simulator; and finally, after many years, severe symptoms appeared, and resulted in death." It is exactly this class of case which experience tells us frequently does arise. And here facts have to be interpreted by each one's individual experience, so that it is not so simple as it looks to pronounce an opinion even on the most apparent symptoms. The railway doctor would appear to be justified in view of trifling symptoms to say this man is a malingerer; whilst some expert having had a case where trifling symptoms subsequently ended in death, might justifiably appear in the witness-box to controvert the railway doctor's opinion. Who shall dare to say that either are influenced by unworthy motives in pronouncing even antagonistic views? There is nothing more certain than the uncertainty as to how railway accidents may terminate. We have known cases where the gravest injuries have been received, and on the nature of which there has been a perfect agreement between the medical officer for the company and the family medical attendant. Prognosis has been given with unanimity that the injuries must end in death, or permanent disablement. Re-compensation has been awarded even to the extent of £10,000. Simulation has been out of the question. Objective and subjective signs have been present to guide experienced physicians and surgeons, yet after some years the patients have been able to again take up the thread of their lives, and resume their occupations. Again, experience also tells us of cases like that recorded by LEYDEN, where injuries, seemingly simple, and treated as of trifling moment, have a few years after the accident, and after settlement, ended in paralysis and death. Spinal concussion is something more than a fashionable name; it is a many-sided symptom. One person may be injured in a railway accident, and throw off the effects thoroughly; whilst another through some inherent weakness may in a few years only show signs of the accident. Subjective symptoms may be of slight or of very great moment; the difficulty comes in the differentiation of the value of these symptoms. Expert testimony has to be guided by many factors, and it is only fair to assume that those who are called in either on the part of the railway or the patient, give their testimony honestly, and without a partisan bias. It is quite possible that in estimating the value of the subjective symptoms, an expert may in one case give an affirmative, and in another negative evidence, as his evidence is based on the sum of the conditions which may necessarily be alike in many cases of accident, in general features, though varying in one essential particular, which make all the difference in the opinion given. Cross-examination, as Dr. BRILL truly says, tests the ability and qualification of a witness, and in this cross-examination we

have the protection for the company sued, as well as for the plaintiff. Under it a weak case is as a rule exposed, because juries are not so dull as not to be able to estimate the value of evidence, and so appraise at its proper value evidence given for the sake of money. In England we have no trained experts except for cases of poisoning, where chemical skill comes in. In the general class of cases specialists, we presume, take their place, as they are to all intents and purposes experts. When specialists are called in, we believe they give their opinions honestly, even though opinions may differ. No two minds are alike. What are so ostensibly and so easily labeled facts, are not so easily to be agreed upon. We may take the case of the illness of the CROWN PRINCE. It is a fact that he has something the matter with his larynx; it is a fact that his larynx has been explored and examined, that there have been objective and subjective signs to guide his medical attendants, yet with such facts, what difference of opinion. One set of observers see in the objective and subjective signs "cancer;" the other give a different and more favourable opinion. Here there is no pecuniary object in view to bias the observers, simply the facts are interpreted in different ways. Thus it is in all cases of accidents, objective and subjective signs have their peculiar significance, not from the bias of the observer, but from the individuality of the observed, who sees in the symptoms a gravity or slowness, depending upon, may be, his antecedent experiences of other cases, or on particular views of pathology. We want a little more charity in our profession towards those who differ from us; it is easy to impute improper motives, against which no man is safe. Dr. BRILL includes in his sweeping indictment, lawyers, and even judges, so that we must not complain if he includes physicians as well. He writes as an impartial, and as a philosophical observer, but we very much fear that he has mistaken his charter; that he has, unconsciously, no doubt, himself been biased, as much as the experts he condemns, by a want of ability to differentiate on the value of evidence and facts.

Annotations.

"Forsan et hæc olim meminisse juvabit."

THE CLERICAL, MEDICAL, AND GENERAL LIFE ASSURANCE SOCIETY.

THE sixty-third annual general meeting of this Society was held at the close of the year 1887 at the Society's office, and the report is most satisfactory. As this Society has a number of medical men on its board of directors, we look upon it as if it were connected with the profession. The names of the medical directors command confidence—viz., Deputy Chairman: Sir William Bowman, M.D., F.R.S. Directors: Lionel Beale, M.B., F.R.S.; Sir Prescott Hewett, M.D., F.R.S.; Professor Humphry, M.D., F.R.S.; Sir William Jenner, M.D.; Sir James Paget, F.R.S.; Richard Douglas Powell, M.D.; William Overend Priestley, M.D. Prospectuses can be obtained from the Secretary, 15, St. James-square, London, S.W.

HOSPITAL REFORM.

At a meeting of the Great Northern Hospital, one of the governors, Dr. Burnes, brought forward the present method of dispensing charitable relief in the out patient department of our hospitals. Dr. Burnes in a circular thus expressed his views:—"Tradesmen and other persons, in a good position go down to the hospitals and get supplied with costly instruments at a small charge—nay, cases have occurred in which an out-patient in good circumstances, after obtaining a one month's supply of an emulsion and medicines for his child, on the plea that it was going away, actually went and sold it to a chemist a little way from the hospital. Thus the money, contributed by generous donors for the relief of necessitous persons, is diverted from its proper channel and those who are able and who would be glad to pay a small fee in order to obtain the skill of eminent medical men, are obliged to consort with the mass of out-door patients, and to receive relief gratuitously. How are these recognized and growing evils to be prevented? Several plans have been brought forward, and notably that of provident dispensaries, in connection with and affiliated to the various hospitals. I venture to submit a plan for the relief of this crying evil, which I think has none of the objections inherent in other solutions of the difficulty, and which, moreover cuts at the roots of the mischief. It would be necessary for the success of the plan that all the general hospitals in London should co-operate to bring about a reform, but as all alike suffer from the congested state of the out-patient's department this would present no insuperable obstacle. The plan is briefly as follows:—In each district of which a hospital forms a centre, an officer should be appointed, styled the Superintendent Almoner, with an office in or near the hospital. Here he would receive all applications for admission to the out-patient department and would make enquiries as to the circumstances of the applicants. He would be able to recommend them either free or on payment of a certain weekly fee, according to their means. Cases in the first place would have to be taken with an order, stamped by the Superintendent Almoner, to any one of the extra-mural officers, affiliated to the hospitals. These officers would be registered medical practitioners, of not less than three years' standing in the district, and a list of such officers would be kept in the office, so that the patients might select whom they pleased. The extra-mural officer would see the case, prescribe for it at once, and should he be satisfied that it was of an ordinary nature and required no special treatment, he would continue to undertake the case. Should he, however, think fit, he would at once endorse the order for admission to the out-door department of his hospital. The fees charged by the almoner would be payable to him, and he would account for the same to the committee. The extra-mural officer being granted a nominal sum per week (say 1s.—3s. 6d. for home visitation) for his treatment of the case while it remains in his hands. The Superintendent Almoner would report every case to the committee, with extra-mural officers's report annexed, if the

case remained in his hands. Of course it would be provided that such patients should attend at the hospital whenever required for examination, &c., and that the extra-mural officer should make a special report of every case which has been in his hands for more than three weeks. The Superintendent Almoner would be expected to make enquiries as to the case of each applicant, and to fix the fee to be paid per week (if any), in accordance with the result of his enquiries. Hence, his first order for medical relief would be only a temporary one, to be endorsed or cancelled as might be necessary. Thus the out-door department would be relieved of its congestion, the necessitous would still receive free relief, while those able to pay would be compelled to contribute to the cost of the charity. As for the financial part of the matter, there would be on the one hand the expenses of Superintendent Almoner and his office, and also the nominal payments made to the extra-mural officers to cover cost of medicine, &c., while on the other hand there would be the money received by the Superintendent Almoner in accordance with his decision.

THE BATHS OF KRANKENHEIL-TOLZ.

THE baths at Frankenheil in the Bavarian Oberland are deservedly attracting the notice of physicians, as the properties of the waters are becoming better known. Tolz is a small town of about 4,000 inhabitants, 670 m. above the sea, and is picturesquely situated on the borders of the Isar, and surrounded by mountain scenery of the most impressive character. The development of Frankenheil has been largely due to the enterprise of the late M. Karl Herder and Dr. Höefler, and under their influence the accommodation for visitors has been made most complete, the bathing arrangements particularly being developed. The season commences about the 15th of May, and terminates on the 15th of October. Those who desire a foreign resort away from the feverish life of some of our health resorts, will find at Frankenheil that repose so much needed, but not found where gaiety and fashion are the rage. There are excellent hotels, as the Badehaus, Kurhotel, Hotel Sedleman, Hotel Dreppold, Tollhaus, Pension Spenger, besides numerous other restaurants and chalets, which can be rented at a reasonable price. During the season an excellent band is engaged, and other attractions are provided. The climatic conditions of Frankenheil are most favourable. The pure mountain air, with plenty of sunlight, and usually a west wind, conduce to a rapid restoration of patients who require mountain air, and a tonic atmosphere. Apart altogether from the surroundings, Frankenheil possesses some very valuable springs, which have been used with very great effect in cases requiring an alterative treatment. The waters have been found of special value in some diseases of women. In the treatment of obstinate skin affections the Frankenheil soaps are invaluable. In a series of pamphlets issued under the title of "Europe Illustré" (Orell Fussli and Co.), there is an excellent account of Frankenheil and its waters,

THE CLIMATE OF OBAN, N.B.

THE year 1887, has maintained its character for dryness to the end. One of the most remarkable features displayed in the yearly returns for Oban is the high position maintained in regard to the purity of the atmosphere, as shown by the ozone register. "Experience has thoroughly established the fact that where the amount of ozone in the air is *constantly* high, there we almost invariably find a high degree of salubrity."—Burney Yeo. Undoubtedly, the low death-rate, and the general high standard of health enjoyed by residents in Oban, can be in great part explained by this fact. A reference to the following table, in which Oban is compared with other important and well-known towns, demonstrates very clearly the large advantage which Oban possesses in this factor as a health resort :—

QUARTERLY MEAN AMOUNT OF OZONE, REGISTERED OUT OF MAX.

	1886.	1887.	
CALCULATED AT	IV. Quar.	I. Quar.	II. Quar. III. Quar.
Guernsey	3.4	4.1	4.4
Torquay	4.4	3.9	3.7
R. Observ., Greenwich ...	2.3	2.5	2.9
Somerleyton, Suffolk	3.0	3.2	3.1
Carlisle	2.1	1.7	1.4
OBAN	4.3	5.6	5.7
			6.1

} Not yet received.

(Signed) G. WOULE BREMAN, C.E.,
F.R. MET. SOC.

EDWIN BAILEY, F.R. MET. SOC.

The variation existing in the total of this column, and in that exhibited in the 4th quarter of the year, is accounted for in the fact that the above table is computed from the maximum rainfall registered at the high and low level observing stations. The quarterly total is arrived at by taking the high level rain register alone into consideration.

HE HAS THE COURAGE OF HIS OPINIONS.

IN the Report, 1887, of the Medical Officer of Health (Dr. Masterman) for Stourport, we find the following outspoken expressions of opinion :—

But, it may be said, as one death-rate, 20.00 per 1,600, is only that of the urban average, why should I speak of it as excessive. The answer of all competent men is—Because that average *is* excessive and wasteful. The normal and perfectly attainable rate is about 12 per 1,000, and the average age at death should be 55 years. Amongst the Society of Friends only about seven per cent. of their children die under the age of five years; in this parish more than fifty per cent. die before attaining that age. But the foregoing figures shew that amongst the poor, the very parish poor, the death-rate can, by moderate personal attention and the unsparing use of means which recent science has placed in the hands of educated medical man, be brought nearly as low as amongst people with every advantage of wealth and inherited healthfulness in their favour. The great difficulty which meets one in attempting the solution of this and cognate social problems is the personal element on the one hand and the stolid ignorance of the bulk of the people in all matters affecting public health on the other. It is easy to write an Annual Report dealing simply with results and the customary calculations of rates and averages; but the duty of a Medical Officer of Health goes far beyond that: Every question belonging to matters which affect the lives and well-being of the people is within his province, and he is bound to disregard all personal considerations in dealing with them. "The physician," Hippocrates tell us, "must not only be prepared to do what is right himself, but also to make the patient, the surroundings and the attendants co-operate," and this is the difficulty in dealing with the

lower and unreasoning classes. The very poor and hospital patients have, happily for themselves, very little choice in the matter, they are almost obliged to obey the orders given; and the higher and educated classes are too intelligent to disobey them, and so the results in both cases are generally satisfactory. But it is equally ludicrous and provoking to see how people assume the right of private judgment in questions on which they are utterly incapable of forming any rational opinion, and there can be no doubt but that this greatly increases their own and infant mortality by interference with or neglect of the treatment directed. Again, in general terms there can be nothing but commendation of the so-called "club." They are doing more to relieve the rates and teach the value of self-help than any organisation. But the system is reacting disastrously in the very direction where it is intended to be most useful: by neglect of the wage-limit in placing the poor and the well-paid artisan, and often the prosperous tradesman, on the same low level of contributions, it is making the medical appointments a test of professional degradation and keep up a class of practitioners of a very undesirable type, which, at no distant date, will alone consent to hold them. As it is, the medical journals teem with advertisements of unqualified assistants, of holders of single diplomas and third-class licenses, to cheaply take charge therein and—in plain terms—what else can be expected for the money! If the question were how to get something of definite value (but that, from the personal equation, it cannot be) at the lowest possible cost, the less paid the better. But only to get medical attendance of any kind and secure some slipshod death certificate to the avoidance of an inconvenient inquest, it is too much to pay even a penny a week for, since men can be found to undertake it for half the sum. *But even in these woeful times, it may be found possible to die too cheaply.*

MEDICAL MONOPOLY IN EDINBURGH.

THE *Scottish Leader*, of January 18th, has an excellent article "On Medical Monopoly in Edinburgh," which opens with the following statement:

It is a fact not generally known that the M.D. degree of the University of Edinburgh is not recognised as entitling its possessor to become a candidate for a post as physician in any of the medical charities in that city. Who would believe that the medical degree of the University whose world-wide reputation largely depends upon its medical teaching would be so little thought of in its own city? What, it may be asked, is the qualification required of candidates for the office of physician to the Medical Charities of Edinburgh? Is it the degree of some University of higher repute, if such could be found? Not at all; it is the Fellowship at the College of Physicians of Edinburgh, without which no one however able or anxious to devote his time and talents to the treatment of patients in connection with the medical charitable institutions of Edinburgh, can hope to do so. This Fellowship costs over eighty pounds, about sixty of which enters the coffers of the college.

The conclusion of the article we thoroughly agree with.

The College itself is not likely to move in this matter, and the only practicable way in which such a manifest wrong can be done away with is for the Court of Contributors or the Managers of the Infirmary and the several charities in the city to take up the subject. By simply altering their rule as to qualifications which it is necessary for their physicians to hold, the evil would be done away with. By their present rule, which admits only Fellows of the College of Physicians as medical officers, they, perhaps unwittingly, limit the number of candidates for such appointments, seeing that the large sum of money demanded by the College for its Fellowship permits only those who can raise the money to gain the necessary qualification. This is a matter which presses heavily upon the medical profession in Edinburgh, and at the same time makes the Charities of the city run the risk of appointing as their medical officers the wealthiest rather than the best men, so that it deserves the earnest and immediate attention of those who alone are capable of redressing the wrong.

MEDICAL TERRORISM.

LIKE a modern Don Quixote Dr. A. Wilson has set his spear at rest, to have a tilt at windmills and creations of his own fancy. Under guise of attacking medical etiquette, medical laws, and medical journalism, he raises objections, and then to his own satisfaction he demolishes them. This knight errant of the nineteenth century makes war in the name of health science. He has a tilt at us because we gave an extract from the answers he usually favours his correspondents with ; some more samples of which we lay before our readers :—

PETER MAIR.—Try Bayley's cure for piles (17, Cockspur-street, Pall Mall, London, S.W.), which in your case is almost certain to effect a cure. It is a safe and trustworthy remedy.

COLD ONE.—Try inhaling the smoke from Dr. Douglas's Maori Cigarettes, or Marshall's Cubeb Cigarettes, through the nostrils. Dr. Dunbar's Alkaram has also a high reputation in checking nasal catarrh.

T. M. J. MUNRO.—It appears to us that you require a tonic remedy such as strophanthus. This would in all probability do you much good, but it can only be used under medical care. We suggest you should consult another physician (*we can send you address if you desire it, on receipt of stamped addressed envelope*), who will pay more heed to the history of your case than did your former adviser.

DUFFUS.—Try the Trichophile Pomade (advertised in our pages) of the French Hygienic Society, 56, Conduit-street, Regent-street, London, W.

NETTA FAIRBAIRN.—Take a pill containing one grain permanganate of potash, to be made up with Kaolin. Take two of these pills, or two dioxide of manganese tabloids, twice daily, after your food, before the period, and let us hear the result after a brief trial of this remedy.

We did not pronounce a definite opinion upon this form of consultation and medical advice, but hinted that the Medical Council was the proper body to decide this question. We commend to our readers' notice the last answer ; for ourselves we feel utterly surprised at any medical man prescribing permanganate of potash in this way. See also the answer to T. M. J. Munro. In replying to our annotation the editor of *Health* simply resorts to the old devise, "No case. Abuse the plaintiff's attorney." We pass over his libellous definition of the *Provincial Medical Journal*, which is as untrue as his other general remarks, and turn to one of his windmills : (1) He tries a side wind to divert attention from the points at issue, by hinting that we wish to curb the "spread of public instruction and health science." We do nothing of the kind. How is health science benefited by the above quoted answers to correspondents, or by the recommendation of Alkaram, Boköl, etc., "advertised in our pages." This is windmill No. 1. We have no objection to Dr. Wilson recommending Ward's wool clothing, which he can do in the pages of his journal ; our objection applies to the principles of medical etiquette violated, in the general answers given in the pages of his journal. (2) We are favoured likewise with a diatribe against "Allopathic (?) intolerance," in which we have the following extraordinary paragraph :—

"There is evinced, judging from recent utterance of the medical press, a spirit which literary translated, means and implies, that given the *veriest fool who has succeeded in passing a qualifying examination for a medical degree or license*, and the public are to be literary coerced into

consulting him before and above any other practitioner who does not belong to the Allopathic School."

Here is another windmill, raised up to be knocked down. What does Dr. Wilson mean, after his own words, a few lines above ?

"I have," he says, "no sympathy with homœopathy. I believe that system of treatment to be founded on erroneous principles, and upon data incapable of being submitted to rational scientific tests."

We must, therefore, encourage homœopathy, and pander to modern credulity. This is admirable fooling, and not "medical terrorism with a vengeance." (3) One more quotation, and we dismiss this journal for good :

"Various periodicals which, like this journal itself, profess to instruct the public in matters of hygiene, have been singled out as fostering quackery, because they have opened their pages to give *simple remedies* for simple ailments, and because they have endeavoured to diffuse a knowledge of plain health laws and hygienic rules. According to the latest development of the medical terrorism, which would equally suppress homœopathy and frighten the journalism of health out of existence, the public are being deluded and endangered on account of the diffusion of health-knowledge."

Simple remedies forsooth (see the answers *passim*). This paragraph is remarkable for its audacity and for its ignorance. The medical press generally has been the pioneer of sanitary reform. The medical press has done everything in its power to encourage the diffusion of health literature amongst the people. Medical men have published popular guides, popular handbooks, dealing with sanitary questions, and the medical journals have favourably reviewed these books and recommended them. In cities and towns medical men have given health lectures, and in every way aided in trying to awaken a sense of the importance of hygiene, and tell the people how they were sinning against the laws of health. The medical press, and the colleges, have been able to differentiate, however, between legitimate health instruction and quackery. The article in question is written *ad captandum vulgus*, and is unworthy of one who has done good service in the cause of education. Its errors arise from a cause easily discerned, to which we need not allude. It would be wisdom on the part of Dr. Wilson to accept our advice and conform to professional customs, and to utilize the pages now devoted to the indiscriminate recommendation of Alkaram, Boköl, etc., to better purposes. There is ample room for a good health journal.

SOME NUTS TO CRACK.

Mr. RITCHIE, President of the Local Government Board, has put the efficacy of vaccination in a very striking light, and it will be extremely difficult to answer him. Speaking at Sheffield, where small-pox prevailed, he said : "Overwhelming evidence has been given during the course of the epidemic of the enormous value and protection of vaccination. It was estimated from clear evidence that the number of unvaccinated children under ten years of age in Sheffield is about 5,000, and the number of vaccinated about 95,000. Out of the 95,000 children who have been vaccinated, there have been 189 attacks, and two deaths ; out of the 5,000 unvaccinated children, there have been 172 attacks, and

seventy deaths. This is the position of affairs. If we were to assume for a moment that all the children of Sheffield under ten were vaccinated, you would have had 200 attacks, and two and a fraction deaths. But if all the children in Sheffield under ten had been unvaccinated, you would have had 3,277 attacks, and 1,330 deaths, or just exactly 600 times greater mortality. Now, gentlemen, it is almost an established fact that after the age of ten vaccination loses a good deal of its effect; so that the moral is, of this visitation, that all those above ten should be revaccinated, and by that means there is little doubt that in a limited space of time Sheffield will be free of the disease. It gives almost entire and absolute protection to those who are revaccinated, and as an illustration I may tell you that during the time that the Hampstead Small-Pox Hospital was open, only one person out of the numerous employees engaged at that hospital took the small-pox, and he was the under gardener, who by some mistake had escaped revaccination. And I am informed by one of the Medical Inspectors of the Local Government Board who has been down here that out of more than 290 men and boys employed in the Sheffield Post Office, not a single case had occurred. Well now, gentlemen, I think after such evidence it is impossible for even the most rabid anti-vaccinators to gainsay the beneficial results following from revaccination.

THE DEATH METHOD OF THE FUTURE.

A COMMISSION was appointed by the State of New York about a year ago to investigate and report on the most humane and practical method of carrying into effect the sentence of death. We learn from the *Journal of the American Medical Association* that the report of the committee has been presented to the State Legislature. The principal devices already in use are the guillotine, the garrote, shooting, and the gallows. The Commission after receiving some 200 replies from judges, attorneys, physicians and sheriffs, report that the guillotine is too bloody, the garrote too barbarous, shooting too uncertain, and hanging too revolting, and have decided in favour of electricity, thereby ensuring instantaneous and painless death. The Commission also insist that the body of the criminal should be forfeited, the execution taking place without publicity. The Commission proposed that the criminal should be placed in a chair having metallic head and foot rests connected with electrodes; a strong electric current should be passed through the body. The cost of the chair would be fifty dollars; the cost of the electric wires from 250 to 500 dollars; while the cost of maintenance and operation would be nearly nominal.

PTOMAINES.

"LIFE is short, and the art long," said Hippocrates. How true this is we know but too well at the present day, when the art is opening out new fields and new studies. We have but to look at the vast literature built up in a few years on bacteria, and now we have a further field to study

in the ptomaines, an off-study of the micro-organisms. The literature of the animal alkaloids is beginning to swell, and we have a list of names, as those of Dupré, Bence-Jones, Sonnenchein, Rorcth, Schwanert, Sermi, Leibermann, Nencki, Brieger, Villiers, Vaughan, and Gautier, who have discovered or advanced the study of these new poisons. Ptomaines appear likely to come to the front, and we would recommend some of our young English experimentalists to take the subject up. Dr. A. M. Brown has done some good service in presenting Gautier's work to English readers.

THE LONDON MEDICAL PAUPERISATION SCHEME.

In the *Provincial Medical Journal*, March, 1887, and in January, 1888, we condemned in plain terms the so-called Metropolitan Provident Dispensaries, and which better deserve the above name. We are pleased to see that our initiative has been taken up, and that the London practitioners have already held a meeting to protest against, and neutralise the scheme. At a meeting held at No. 1, Sergeant's Inn, on February 3rd, Dr. Paramore in the chair, the following resolution was passed:—"That a committee be formed, with power to add to their number, for the purpose of taking into consideration the scheme of the Metropolitan Provident Association, and they be requested to report to a subsequent meeting of general practitioners the objections to be taken to such scheme, and the steps which it may be desirable to adopt for the improvement of the position of the profession." Dr. Corbyn, 13, Abercorn-place, N.W., is secretary.

SHAM ELECTRIC BELTS.

THE *Electrical Review* has been doing good service in exposing the impostures connected with electric belts, and asks for the support of the medical press in its efforts. We fear the craze or fashion is beyond the pale of medicine to control, though we nevertheless gladly aid our cotemporary, and substantiate, by observation and experience with these appliances, the charges made, that these belts, sold at high prices, are not worth the money. This is all we can do. The world, according to Carlyle, is made up of fools mostly. If £3 3s. or £5 5s. can be obtained for a piece of flannel and a few metal discs arranged in order there will always be enterprising *entrepreneurs* to pick up the offerings of individuals who are so easily duped. Medical men have in every age protested against this and other forms of quackery, but some of the people pass by the way and encourage the charlatans. The lay press publish long and expensive advertisements of various medico-electric appliances, and evidently the demand is equal to the supply. We regret this, as it tends to bring into disrepute true medico-electricity.

COMPETITION IN THE PROFESSION.

In Wigan competition in the medical profession appears to be particularly strong, if we may judge from the doings of several of the medical men there. A few weeks ago a club surgeoncy fell vacant owing to the removal of the

holder of the appointment from the town. The committee of the club altered their rule in reference to radius, to five miles instead of three, and the fee per member per annum they left the same—namely, 2/6. The club numbers in round numbers 400 members, and is thus worth about £50 per annum. Now for this large sum the competition was most extraordinary; circulars were sent out to each club member, and house-to-house canvassing was adopted. One candidate, a hospital surgeon, offered to go six miles, and for the benefit of the members to open a branch surgery two miles from his house. Another candidate offered to do the same in another district; whilst a third candidate enumerated his number of years experience in learning the requirements of club patients, and also the number of his branch surgeries in convenient districts; whilst a fourth to out-do the others—and he succeeded in out-Heroding Herod—sang the praises of his eminently qualified assistant, who lived in the same house with him: he descried branch surgeries as a delusion and a snare, as he said he had tried them, but promised that, “we shall be able and willing to attend to all patients, both from far and near, in the five or six mile limits;” that by carrying a case of urgency drugs and instruments, patients in pain could be relieved on the spot, and wound up his circular with a peroration which is unique, and which we here transcribe for the benefit of our readers. He says: “When there is a main surgery as head-quarters, in the centre of the district, telegrams, urgent messages, and post cards can be sent, and will find one of us on the spot, and ready to drive to where pain and disease are making the attack. One man can only do a certain amount of work, and he cannot be in two places at the same time; so that it is necessary that the assistant be a first-class man, or you will find your mistake out when sickness comes upon you.” After all this there is no wonder that the respectable portion of the profession in the town felt aggrieved at this very “mercantile spirit” of their *confrères*. The Medical Society at a recent meeting, unanimously passed the following resolution: “That it is inadvisable for members of the medical profession to issue circulars, or to use a systematic canvass for club appointments.”

A DUELLING EPISODE.

By the death of Dr. Maddox, of Rapides, New Orleans, there is a link broken between the old America and the new. The following occurrence reads to us like a romance at the present day, but it is true (*New Orleans Medical and Surgical Journal*):—Dr. Maddox died in his ninety-sixth year, and was the last survivor of a famous duel which took place in the year 1835. Dr. Maddox and Samuel Wells, brother of Governor Wells, went out to fight a duel, accompanied by Colonel Crain, Colonel Blanchard, and Major Wright, on the Maddox side; and General Cuney and James Bowie on the Wells side. Bad feeling had existed for some time between these gentlemen. Colonel Crain was even then disabled from a gun-shot wound from

General Cuney. Dr. Maddox and Wells settled their difficulty, and did not fight. But this did not appear to be satisfactory, however. Somehow or other, Colonel Crain, resting his lame arm on the other, fired two pistol shots, one of which killed the opposing party, and the other severely wounded Colonel Bowie. While Bowie was lying on the ground, he managed to grasp Major Wright, who approached him with a sword cane, and literally carved him to pieces with the original bowie knife which on that occasion drew its first blood. Bowie fell subsequently, with Crockell and Travis, at the Alamo massacre in 1836.

THE CASE OF THE CROWN PRINCE.

SIR MORELL MACKENZIE, at the request of the Crown Prince, has placed on record the following report:—

“The general idea is that I am of opinion that the disease from which His Imperial Highness is suffering is cancer; the view, on the other hand, which I have consistently maintained is, that there never has been any proof of the existence of cancer. To enter more into detail: when I arrived in Berlin last May, I stated to my colleagues that in my opinion the appearances seen in the throat were of a negative character—that is to say, that the disease might be either benign or malignant, and that its value could only be determined by microscopical examination. A portion of the diseased tissue having been taken away by me from the throat of His Imperial Highness, it was submitted to Professor Virchow, who could not detect in it anything of a malignant nature. Repeated examinations by Professor Virchow of other portions removed by me yielded similar results. In the month of July, whilst His Imperial Highness was staying in the Isle of Wight, I pointed out to more than one of his august relatives that the danger that I most dreaded was the occurrence of perichondritis at a future date, and three months later this fear was found to be well grounded. At the end of October, and early part of November, entirely fresh symptoms appeared, and at that time the local disease presented an appearance which was consistent with the diagnosis of cancer. It was then impossible to obtain any fresh microscopical evidence in the matter, and I considered it safer accordingly to treat the case as one of a malignant nature. At the same time, however, I drew up and submitted to my colleagues a protocol, in which I stated that although the disease at that moment looked like cancer, I could not agree that the malady was proved to be malignant until a further microscopical examination had been made. The document in which I set forth my views was forwarded to Berlin, to be placed in the State Archives. Although the unfavourable symptoms then present were explicable on the ground of the existence of cancer, yet it was clear to the majority of the physicians at that time in attendance that perichondritis had supervened. In the middle of December, however, the unfavourable signs had passed away, and there were no longer any clinical symptoms of cancer. Microscopical

evidence on the subject was, however, still wanting. This was furnished at the end of January, when a slough was expectorated from the very spot which had presented such a highly suspicious appearance in November. This slough was most carefully and repeatedly examined by Professor Virchow, and the result (which is now published) again shows that cancer could not be detected. To recapitulate: In my opinion the clinical symptoms have always been entirely compatible with non-malignant disease, and that microscopical signs have been in harmony with this view. I need only add that although in nearly every case of laryngeal disease it is possible at the first inspection to form an accurate opinion as to the nature of the disease presenting itself, yet in a few rare instances the progress of the complaint alone permits its character to be determined. Unfortunately, the case of His Imperial Highness is among the latter number, and at this moment medical science does not permit me to affirm that any other disease is present than chronic interstitial inflammation of the larynx, combined with perichondritis.

"San Remo, February 12th, 1888."

WHAT IS GAVAGE?

GAVAGE is the name given to a new system of feeding newly-born children, who are born before term, or who are delicate. The apparatus necessary for the purpose is very simple. Take a piece of gutta-percha tubing about the size of a No. 14 or 15 French catheter. This is fixed on one of the breast shields in common use for sore nipples. The child is placed on the knee of the nurse, with the head slightly raised. The sound is moistened with milk, introduced at the base of the tongue; the child by a reflex act of deglutition will generally draw it as far as the entrance to the œsophagus, if not it is gently conducted there until fifteen centimetres of the sound are introduced. Pinch the sound between two fingers, pour into the cupula two or three tablespoonfuls of milk, and relax pressure until it flows gently into the stomach. The sound must be taken out gently and quickly, and the infant placed in the warm cradle or couveuse. The apparatus must be washed in a solution of boric acid and pure water. The quantity of milk given to the weakest infants is eight grammes every hour. In general, in spite of gavage, the child loses weight for the first few days; but weight soon begins to increase regularly. Gavage carried out according to the rules minutely laid down by M. Tarnier has produced marvellous results and veritable resurrections. Children of six months by the couveuse and gavage have been reared, and M. Tarnier hopes even to arrive some day at the rearing of children born before the end of six months.

New Remedies.

Antipyrine is now frequently employed hypodermically, and for preventing the development of fungoid growths in the solutions used for this purpose the addition of a small quantity of carbolic acid has been suggested. It has been found, however, that carbolic acid causes a

uridity in the solution. Experiments made with the view of preventing this turbidity have shown that it is due to the formation of a compound of the two bodies, and that some other antiseptic must be used instead of carbolic acid, since the latter cannot be added in sufficient quantity to produce sterilization without affecting the strength of the solution of antipyrine.

Erythrophleine, the active principle of sassy or casca bark, has now for some time been known to exert a powerful action on the heart, but there seems reason to believe that another property is possessed by this alkaloid which has hitherto been overlooked. From an African arrow-poison, known as "haya," examined by Dr. Lewin, and which was judged to be derived from *Erythrophleine guineense* by some fragments of bark contained in it, a solution was obtained, which caused complete and prolonged anæsthesia when injected into the eye of a cat. The supposition that this was due to erythrophleine was confirmed by the fact that the solution of haya poison, when treated with sulphuric acid and evaporated to dryness, gave a rose colour like erythrophleine. Dr. Lewin states that immediately after an injection of a 0.2 per cent. solution in the eye, an anæsthesia is set up which lasts from two to two and a half days. Weak solutions cause at first a smarting, which soon passes off, and stronger solutions than the above strength may even cause irritation of the cornea. On the other hand it should be stated that the haya poison gave indications of the presence of a glucoside as well as an alkaloid, and that the anæsthetic property may be due to the glucoside.

Resorcin may now be added to the list of remedies, already a numerous one, employed for sea-sickness. In a note in the *Lancet* (p. 39), Dr. Andrew states that, if given early before vomiting, a single dose of ten or twenty grains removes the giddiness and nausea, and enables the patient to sleep comfortably. In more difficult cases larger doses have to be given two or three times a day. Dr. Fronstein has also found it useful in cases of laryngeal tuberculosis. He employs it to allay the pain and distress caused by ulceration of tubercular origin.

Embelia ribes, an East Indian plant, the fruit of which has been proved by European practitioners to possess considerable value as a remedy for tape-worm, has been submitted to a chemical examination by Mr. C. J. H. Warden, with the view of isolating the active principle. On treating the fruit with chloroform, by percolation, a yellow crystalline principle was obtained, which gave a red reaction with alkalis. This was proved to possess the properties of an acid. From the chloroformic solution it can be removed by caustic soda. On neutralising the alkaline solution with an acid, the new acid, to which Mr. Warden has given the name of embelic acid, is precipitated of a yellow colour. It is soluble in alcohol, but scarcely soluble in water. It is not yet certain that the activity of the drug is due to the embelic acid, but evidence will be shortly forthcoming on this point.

Quebracho has been lately employed by Bourdeaux as an external application in the form of fluid extract. Applied to recent wounds it causes a transient pain at first, and acts much like collodion, rapid healing taking place. Good results also follow its application to burns or frozen parts. In the course of an hour the fluid extract hardens and forms a brown crusty layer, which cannot be easily removed unless warm water be used. When the crust falls off the wound is invariably healed. The quebracho used by Bourdeaux is probably the red quebracho bark (*Loxopterygium Lorentzii*), which yields a red astringent extract very different to anything that can be obtained from the bark of ordinary or white quebracho (*Aspidosperma Quebracho*).

Benzoate of Sodium has recently been recommended by Dr. A. S. Partzovsky, of Moscow, for the treatment of uræmia. In ten cases treated by him, three of which were suffering from interstitial and seven from parenchymatous nephritis, the drug was given hourly, in doses which amounted during the day to one or two drachms. It was administered in various ways—in solution, wafers or capsules, or enemata where internal administration was impossible. Nine patients recovered and one died. Dr. Partzovsky believes that benzoate of sodium shortens the attacks, the convulsive attacks gradually ceasing, and the

patient falling into a deep sleep. The patients usually awake in a state of full consciousness. Albuminuria generally disappears altogether. If given when the symptoms—viz., headache, dilatation of the pupil of the eye, and sickness—first appear, the attack may often be entirely ward off.

Periscope.

I.—GLEANINGS IN MEDICINE.

By W. B. KESTEVEN, M.D.

On the Transmission of Rabies from Mother to Fœtus through the Placenta and by the Milk (*Centralblatt für Chirurgie*, No. 46. *E. Perroneito e Carita*, from *Giorn. dell. accad. d. Med.*, Torino, 1887).—A pregnant guinea-pig, five days after inoculation, brought forth four premature young ones, which lived only a short time, the mother dying after a few days from undoubted rabies. The fœtusses were placed in a ten-per-cent. dilution of sulphuric acid. The spinal cords were used in the Pasteur method for the inoculation of a guinea-pig which remained healthy, while another died with symptoms of rabies. From the spinal marrow of this animal two guinea-pigs and one rabbit were vaccinated, and died respectively on the seventh, eighth, and eleventh days with paralytic rabies. Hence the transmission from mother to fœtus was, according to the authors, proved. With reference to the transmission of the poisons by the milk, two pregnant rabbits were inoculated; one aborted, the other had two healthy young ones which were suckled by the infected mother. The mother died from rabies eight or nine days subsequently. The young ones also died in a few days. From their spinal cords a rabbit and a guinea-pig were inoculated, both which died rabid, confirming the diagnosis with reference to the mother's milk; but it is possible that the poison may have been conveyed through the placenta before birth.

Spurious Hydrophobia (*L'Union Médicale*).—M. Mernch, at the Société de Médecine de Paris, related the case of a spirit drinker who, whilst drinking, saw in his glass a sediment, at which he took fright, and was seized with constriction of the throat followed by headache, a general stiffness, and sense of fatigue in his limbs. This occurred on a Sunday. During the following night, and on Monday and Tuesday, he was sleepless, oppressed with a feeling of suffocation, spasms in the throat, a horror of liquids, which he threw away with the glass. His appearance was that of restlessness, with a fixed haggard glare, pupils dilated, speech short and interrupted, and shortness of breath. The offer of liquids was rejected with affright, and brought on a sense of suffocation and tightness of the throat. Light and brilliant objects were distressing to him. He died on the Tuesday evening, after having been the subject of a furious delirium, with extreme agitation, uttering loud cries. He was profusely salivated—spitting, and biting his clothes, and endeavouring to bite his attendants. He presented all the characters of furious hydrophobia, but he had not been bitten by any animal. He had, however, experienced previous attacks of the same kind, at long intervals, and it transpired that he belonged to a family in which insanity existed.

The Micro-organisms of Varicella. By Guttman, Berlin (*L'Union Médicale*, November, 1887).—In one case, the serosity of which was cultivated on Agar-agar, Dr. Buttman found three varieties of micro-organisms: (1) *Staphylococcus pyogenes aureus*. (2) *Staphylococcus viridis*, the yellowish-green colonies of which did not liquefy gelatin. (3) *Staphylococcus blanc*, the cultures of which had a pearly lustre. In a second case the author found only two of these microbes. In a third case the *Staphylococcus nacré* was found, with another which he did not succeed in isolating.

The value of Tincture of Strophanthus (*The Journal*, Chicago, January 14th, 1888, from *Deutsche Medicinische Wochenschrift*, 1887).—Dr. Hochhaus thus summarizes his observations of the effects of tincture of strophanthus:

1. For valvular weakness in the stage of compensation disturbance, tincture of strophanthus is an excellent remedy in certain cases, to retard, strengthen and regulate the cardiac action. The retardation occurs first while the regulating effect only takes place, as a rule, after a few days. Dyspnoea and oedema are promptly relieved. But the favourable effects, in about one-half the cases, do not appear with the regularity and safety peculiar to digitalis; and in most cases in which strophanthus failed digitalis was effective. Digitalis has, generally, a quicker and more thorough effect, especially in causing diuresis, while strophanthus affects a disturbed respiration far more favourably. It is more difficult to indicate strophanthus than digitalis in cases of valvular

weakness, so that it is almost impossible to say beforehand in what cases strophanthus will probably be successful.

2. In chronic degenerations of the cardiac muscle, with usually a small, frequent, and irregular pulse, great difficulty in breathing, and oedema, tincture of strophanthus may be relied on.

3. In acute and chronic nephritis the effect of strophanthus is not so marked as in the above mentioned affections. The dyspnoea often yields to its influence as in the other diseases, but the diuresis and oedema are not favourably affected by it.

4. In cases of palpitation and apnoea of nervous origin strophanthus often gives marked relief.

5. Oedema of a cachectic character may be also favourably affected by tincture of strophanthus.

6. In some cases the drug has secondary effects on the digestive tract, causing a loathing of food, followed by vomiting after eating, and sometimes by severe diarrhoea. But, as a rule, the aversion to food is the only disturbance, and passes off when the stomach becomes used to the drug.

7. Hochhaus advises to begin with doses of gtt. vj, t. i. d., in a tablespoonful of water or wine, and to add gtt. ij daily to the dose until the effect is obtained; though it is not advisable to give more than gtt. xx t. i. d. Gtt. iij t. i. d. is the proper dose to begin with for children, but the doses should not exceed gtt. v, t. i. d.

8. The effect usually appears on the second or third day, and generally lasts a week or two weeks, though there is considerable variation. Hochhaus has never seen a cumulative effect, even after long use of the drug.

9. While strophanthus cannot lay just claim to all the praise bestowed upon it, it is valuable as an occasional substitute for, and ally of digitalis.

On Ocular Cephalalgia. By M. Parinaud, Paris (*Ophthalmic Review*, January, 1888: from *Rev. d'Ophthalm.*, December, 1887).—The author divides all cases of headache arising from use of the eyes in two chief classes, (A) *ocular cephalalgia*, properly so called; (B) *neuro-ocular cephalalgia*. Class A includes all cases in which the muscular apparatus of the eyes is at fault, and two sub-divisions naturally suggest themselves: (1) Cases in which there is defect of the internal recti (*muscular asthenopia*); (2) cases in which the ciliary muscle is more or less incapable (*accommodative asthenopia*). In both conditions sustained use of the eyes gives rise, among other symptoms, to headache, usually supra-orbital or frontal, but often becoming rapidly general, which lasts a varying time after the cessation of work. In muscular asthenopia the pain is frequently preceded by a sensation of fatigue, which patients compare to the tired feeling following great muscular exertion, and which they localise in the inner side of the eyeballs. At other times there is an ill-defined *malaise*, or a feeling of tension or pressure in the orbits, and in certain cases nausea and vertigo. Parinaud includes in class B all cases of asthenopia or cephalalgia produced by use of the eyes, in which neither hypermetropia, astigmatism, nor insufficiency of the internal recti can be found. The cause, he thinks, rests with the nervous system. Hysteria, neurasthenia, adolescence, excessive mental application, and an arthritic diathesis are mentioned as conditions in which neuro-ocular cephalalgia is met with. The cephalalgia of adolescence, which has been investigated by Keller and Blache, occurs between the ages of fifteen and eighteen, and is more frequent in males than females. The pain in these cases is peculiarly frontal, and sometimes localised as two painful points at the roots of the eyebrows. Use of the eyes always intensifies the pain. Correction of any error of refraction which may be present has but little effect, and the only successful treatment is complete rest of eyes, and improvement of the general health.

A case of Tubercular Inoculation through performance of the rite of Circumcision (*Centralblatt für Chirurgie*, No. 46).—The rite was performed on the eighth day. The wound (according to the ordinary custom) was several times sucked by an old man. About the fourth week thickening of the frænum, with enlargement of the inguinal glands appeared. Syphilis was suspected, but antisyphilitic treatment proved useless. Suppuration of the inguinal glands followed. Soon afterwards an abscess of about the size of a cherry appeared in the right gluteal region. The diseased surface of the penis, and the discoloured edges of the inguinal abscess, were removed by the knife. Microscopical examination of the diseased parts showed abundance of miliary tubercle and tubercular bacilli.

Guaiacol, a substitute for Creasote (*Journal de Médecine de Paris*, 29th Janvier, 1888).—Guaiacol (C⁷ H⁸ O³) is the principal element of creasote. Sahli recommends it to supersede the uncertain action of the ordinary more or less pure creasote. It is obtained by distillation from beech creasote, whence it may be obtained in large proportions, as much as ninety per cent. The distillate is shaken several times with a weak

solution of ammonia and redistilled; it is then dissolved in an equal volume of ether, with the addition of slight excess of alcoholic solution of caustic potash. The precipitate which is formed is then to be washed in ether, crystallised in alcohol, and lastly saturated with diluted sulphuric acid. The guaiacol separates in the form of a liquid, having an agreeable odour, with a sp. gr. of 1.117 at 55° F. It requires to be kept protected from light.

On the Parasitic Nature and the Treatment of Furunculus and Anthrax (*L'Union Médicale*, Janvier 21st, 1888).—Assuming the parasitic nature of furunculus, M. Verneuil dealt much upon the value of pulverisation of the antiseptic solutions of phenic or boric acid, repeatedly applied, which, he asserts, renders abortive the inflammatory process. He not only advocates, hereby, the cure of the boils, but in order to prevent their recurrence urges the antiseptic internal treatment proposed by M. Bouchard, which consists in the administration of naphthol, salicylate of bismuth, and magnesia, in small doses, every four hours. The latter treatment alone in one instance was successful without the use of the spray. The same principles of treatment are applied by M. Bouchard to the treatment of carbuncle.

Permanent Polyuria following Fracture of the Base of the Skull. By A. Berri (*Centralblatt für Chirurgie von Spérimentale*, No. 5).—A man, aged thirty-six years, from a fall down stairs sustained fracture of the base of the skull. At the end of a fortnight he was so far recovered that the original symptoms were no longer noticed. The only complaints of the patient were deafness on the left side and occasional pain on the right side of the occiput. Polyuria was now noticed. On the 17th day, 3,800 g. and on the following day 4,100 g. of acid urine were measured. Sp. gr. 1.010; no sugar or albumen. In the course of the following week the quantity of urine fell to 3,000 gs. and then gradually fell to the normal quantity. The patient died of pulmonary disease about ten weeks later. The only noticeable lesion of the bones was a darkish line of from three to four lines in length in the posterior cranial fossa. Corresponding to this the dura mater was covered with a thin yellow deposit to which to the extent of a mark was adherent to the nervous substance. Nothing abnormal besides this was seen on the brain, nor in any other organ.

The Therapeutic Uses of Boric Acid. By M. Gaucher (*L'Union Médicale*, 31st Janvier, 1888).—M. Gaucher has put to test the toxic powers of boric acid by administering it to guinea-pigs. To these animals, of the weight of about 300 grammes, he gave, daily, fifty centigrammes during fourteen days, without any injurious effects. It is not caustic, is tasteless, colourless, and inodorous. It has been found an efficacious infectious impetigo application; in the form of ointment, after poulticing. In tuberculous ulcerations, also, M. Gaucher has found this remedy very useful—and has moreover employed it with advantage, internally, in phthisis. Boric acid passes rapidly into the urine and hence is of service in vesical maladies, as chronic cystitis and enlargement of the prostate.

Ocular Symptoms in Insular Sclerosis and in Ataxy. Charcot, Paris (*Ophthalmic Rev.*, January, 1888, and *Rev. d'Ophthalm.*, November, 1887).—One of the most common motor disturbances in ataxy is paralysis of the external rectus, or muscles supplied by the third nerve. This is of rare occurrence in disseminated sclerosis. In this form we find paralysees whose cause must be sought in the central nuclei. These are not peripheral paralysees, such as occur in ataxy, but lesions whose objective signs are defects of coördination, shown by paralysis of the associated movements of the eyes; when looking to the right or left, the margin of the cornea fails to reach the inner or outer commissure, or there is an appreciable lagging in the rotation of one or other eye. The earliest symptom of this condition is an inability on the part of the patient to fix on an object with precision, and a, consequently, vague look. Oscillatory movements of the eyes occur, closely allied to those of nystagmus, and at first there may be slight diplopia. A study of the movements of the iris is chiefly valuable in relation to ataxy. One pupil is sometimes contracted to a pinhead in size, while the other is dilated—a condition seen only in tabes or general paralysis of the insane. A more important indication, however, is that known as the Argyll-Robertson pupil, the pupil showing no reaction to light; well marked contraction occurring in association with convergence and accommodation. It is this contrast between its action to light and accommodative efforts which constitutes the Argyll-Robertson pupil. Atrophy of the optic nerve, with its characteristic ophthalmoscopic appearances, will also be seen by examination of the fundus, in tabes. This atrophy is frequently the first sign of ataxy. Amaurosis may also be present in disseminated sclerosis, but unaccompanied with any ophthalmoscopic change beyond pallor of the papilla. It is, moreover, a defect which may disappear, as the axis cylinders are not destroyed the functions of the nerve may be re-established. In dis-

seminated sclerosis there is sometimes a contraction of the field of vision, as in hysteria.

New Researches on the Poison in Expired Air (*L'Union Médicale*, 21st Janvier, 1888).—At a meeting of the Academy of Sciences (Jan. 16th) MM. Brown-Sequard and d'Arsonal showed that by condensing the aqueous vapours given off by the lungs of men and mammiferous animals in good health, an extremely powerful poisonous liquid is obtained capable of causing speedy death. This poison they find to be an alkaloid, and not, as supposed, to consist of a series of microbes. This poison injected beneath the integuments caused death as rapidly as when injected into the vessels. The animal dies without convulsions, and upon examination the *vena cava* and large vessels are found to contain red blood while the left ventricles and arteries contain but a small quantity of dark blood. The influence of the poison, the authors consider, is expended on the base of the brain. This fluid, exposed to a temperature of 212° F. does not lose, but rather gains strength. It is, therefore, inferred that the deleterious effects are not due to microbes. Further experiments and researches prove the poison to be analogous to ptomaines and leucamines.

Prophylaxis of Ophthalmia Neonatorum (*Centralblatt für Gynäkologie*, 28th Januar, 1888).—The plan here advocated is that of Dr. Von Kaltenbach, which consists in washing the vagina, previous to and after delivery, with a solution of sublimate, 1 in 3,000, and mopping the eyes of the infant with the same, taking care not to introduce the liquid between the lids. Dr. Nebel reports that he had treated in this way 330 infants, among which number not one instance of ophthalmia occurred. In two or three cases through inadvertence the inflammation occurred, but was arrested speedily by the application of cold water. This antiseptic treatment is not only of advantage for infants but is also of great benefit in protecting the maternal organs from infectious maladies.

Heredity manifested in Cataract. By G. A. Berry, M.B. Edin. (*The Ophthalmic Review*, January, 1888).—A series of cases are mentioned by Dr. Berry, including fifty-five individuals belonging to five generations—twenty-eight were females, twenty-seven females. Twenty had cataract, eight males and twelve females. The hereditary tendency was therefore more strongly marked in the females. The predominance may not be so great as may appear, from the impossibility of tracing the descendants of some of the cataractous generations. In respect of preponderance of heredity, transmission through the female differs from most which have been published. This may possibly be on account of the different nature of the cataract, whether senile or juvenile. In true congenital cataract Dr. Berry has never found any evidence of heredity. No other disease besides cataract appears to have been transmitted at the same time. A point of general rather than special interest, in connection with heredity, is the tendency for the cases to appear in succession, showing a greater tendency to inheritance from the mother, as far as cataract goes, at one particular time of child-bearing life than at others. In no instance had the eldest girl escaped.

Poisoning by Phosphorus detected Three Months after Death (*Journal de Médecine de Paris*, 1 Janvier, 1888: quoted from *Vierteiljahrsschrift für Gerichtliche Medizin*).—The case referred to is supposed to be the first instance in which chemical analysis has detected the fact of poisoning by phosphorus three months after death. All the organs in the body contained the product of oxidation—phosphoric acid. Small quantities of antimony and arsenic were also detected. It was ascertained that rat-poison had been administered with criminal intention.

A case of Total Absence of Uterus, Vagina normal. By Dr. Steinshneider, Frauenbad (*Centralblatt für Gynäkologie*, 28th Januar, 1888).—The subject, in this case, was twenty-eight years of age, had been married five years, had never menstruated. For last three years had at intervals suffered from general failure of health with loss of appetite, flatulency, and constipation. For these complaints, to which she attributed her childlessness, she sought medical advice. She presented an anæmic aspect, of middle size, with small but well shaped bosoms, and not very broad pelvis. The external genital organ normal, the clitoris small, the labia loose and free from thickening—the vagina eight centimetres in length (=about three inches Eng.) terminated in smooth *cul de sac*. A combined vaginal and rectal examination showed a total want of uterus, and, as there seemed to be no doubt, an entire deficiency of ovaries. She had never experienced menstrual pains, neither had she active desire for sexual intercourse, on her own account; she was not conscious of any voluptuous feelings which doubtless is attributable to the absence of ovaries.

Removal of a long fixed Pessary (*Centralblatt für Gynäkologie*, 28th Januar, 1888).—At a meeting of the Gynecological Society of Kief (May 9th, 1887), the case was related of a removal, piecemeal, of

a pessary from the vagina of a patient, who had worn it uninterruptedly for twelve years. The use of an occasional injection had been employed. No special inconvenience or pain had occurred, but the persistence of an offensive discharge had occasioned application for medical advice. The pessary, which had become black, was of annular form, of light wood, about eleven inches in circumference, and a diameter of about three and a half inches. In the posterior wall of the vagina was a deep groove, the walls of which appeared of a schirrous nature.

Abscesses resembling Glanders induced by Hypodermic Injections of Morphine (*L'Union Médicale*, 17th Janvier, 1888).—M. Fereol relates the case of a man who presented on his body a number of abscesses, in the pus of which were seen bacilli, in form resembling those of glanders. Inoculations of these in a donkey proved negative. The man had not suffered from glanders, although he had been concerned with glandered horses. It was discovered that this man was in the habit of using hypodermic injections of morphine, as frequently as three times a day, by which a cacheatec condition favouring the formation of abscesses had been induced.

On the Treatment of Traumatic Separation of the Epiphysis of the Head of the Humerus. By Dr. von Helferich (*Centralblatt für Chirurgie*, 21 Januar, 1888).—This rare accident is usually associated with dislocation of the joint, and is often wrongly treated through the true nature not being recognised. In a case related by Dr. von Helferich the patient, sixteen years of age, in wrestling was thrown to the ground on to his left shoulder. The round head of the bone could be felt in its normal position under the acromion. The end of the shaft of the bone could be detected, forwards and inwards, under the coracoid process. A shortening of the arm by a centimetre and a half was found. The lower portion of the humerus was seen to be inclined outwards and downwards. Forcible extension downwards produced a slight crepitation. An incision into the joint was made, and the upper end of the bone; by an enlargement of this narrow "button hole" in the axilla, the two portions of bone were affixed together by a long needle. The ligature brought between the edges of the wound was removed in eight days. Union took place without any drawback, and the shoulder joint rapidly recovered its normal movements.

II.—NOTES FROM RUSSIAN JOURNALS.

By VALERIUS IDELSON, M.D., BERNE.

On Hermaphroditism.—In the *Vratch*, No. 50, 1887, p. 962, Dr. J. Bondareff, of Kiev, describes an interesting case of pseudo-hermaphroditism, of Foerster's "transverse" variety, which he happened to meet with in Professor Troitzky's female syphilitic wards in the Kirillovsky Hospital. The individual in question was admitted to the hospital (on account of constitutional syphilis) as a "peasant woman, aged thirty-five, single." The patient was found to be well made, fairly muscular, measuring 161 centimetres in height, and possessing rudimentary, but quite distinct beard and moustaches, and harsh and rough voice. There were present middle-sized mammary glands. The distance between the anterior upper iliac spine measured twenty-six centimetres, that "between the iliac cristæ" also twenty-six, and the diagonal conjugata eleven. The genital slit was three centimetres long. The major labia were middle-sized, the right being somewhat larger than its compeer. Each of them contained an oblong body of the size of a male testicle, which was situated in the upper part of the fold in the right labium, and close to the outer opening of the inguinal canal in the left one. A cord, of the size and consistency of a spermatic funicle, was found to be attached to the upper end of each testicle-like body, to pass up into the pelvic cavity. The minor labia were developed but very imperfectly, and "represented something like appendices of the prepuce of the clitoris." The latter measured six centimetres in length and four and a half in its circumference, and most closely resembled a small penis with a glans, corona, foreskin, and frenulum, but without any urethral meatus. The orifice was situated (to judge from the author's drawing) considerably lower down, close to the upper angle of the vaginal opening, and had the shape of a "patent oblong slit which very easily admitted a forefinger, and even two fingers." The vagina was not longer than three centimetres, and was terminated by a blind pouch with a small rudiment of a womb. Not a trace of any ovaries (or of a hymen) could be detected. The patient never menstruated. According to "her" statements, "she" has a regular sexual intercourse with "her" sweetheart, but performs successfully coitus also with women. Taking into consideration an extreme shortness of the vagina on one side, and a strikingly patent condition of the urethra on the other, Dr. Bondareff comes to the conclusion that the person's coition with the male sweetheart takes place through the urethral canal.

In the *Russkaia Meditzina*, No. 43, 1887, p. 710, Dr. Lükomsky, of

Prilükii, publishes a brief note on a case of what seems to be a rare specimen of true hermaphroditism. A newly-married peasant couple requested him to tell them whether the bride was a woman or a man. The examination showed that the bride possessed both the male and female sexual organs. The former were represented by a penis as thick and nearly as long as a man's thumb, but void of any prepuce or urinary orifice, and by a well-developed scrotum with two testicles of the size of a pigeon's egg. There was found also a complete set of female genital organs—viz., breasts (under-sized), clitoris, with an urethral orifice beneath, major and minor labia, and a genital slit with a recently ruptured hymen (with caruncles). The vagina was fairly spacious. A small-sized uterine cervix could be seen through a speculum. The individual never menstruated, but had sexual intercourse both with men and women. The patient, however, feels an intense aversion ("hatred") towards men, but is extremely fond of women, the sexual act with whom is terminated by discharge of a whitish fluid from the vagina. A divorce was at once granted to the couple by the Most Holy Synod.

Poisoning by Chlorate of Potash.—At a recent meeting of the St. Petersburg Society of Russian Practitioners, Dr. R. N. Manotzkova, a lady physician attached to the Obükovsky Hospital, read an instructive paper (*Vratch*, No. 48, 1887, p. 938) on two female cases of suicidal poisoning by chlorate of potash. One of the patients, a well-made and nourished, previously healthy domestic servant of seventeen, swallowed one ounce of the crystallised salt, mixed with some water, about 1 a.m., the first symptoms (nausea and vomiting, with crystals in the dejecta) making their appearance as late as 3 p.m. On examining the girl about seventeen hours after the ingestion of the poison, the author found a cyanotic discolouration of the face and hands, as well as a distinct icteric one of her scleræ and integuments, a considerable enlargement and tenderness of the liver and spleen, a dark brown discolouration of the (scanty) urine, with intense albuminuria, dark brown fine-granular casts, sp. gr. 1016, a faint acid reaction, and voluminous cinnamon brown deposit, a numerical increase of leucocytes, as well as numerous microcytes in the blood (from a finger). Immediately after her admission, a washing-out of the stomach was made and a purgative administered. During the first nine days the daily amount of her urine oscillated between 200 and 600 cubic cc., but on the tenth it rose to 1,200. The sediment disappeared from the urine on the fourth day, albuminuria on the fifth, a brown discolouration, however, only on the tenth, while the liver returned to its normal state on the thirteenth day. Cyanosis and jaundice were losing their intensity but gradually. The temperature remained normal all through, the pulse varying between sixty and one hundred, and breathing between eighteen and thirty per minute. The girl left the hospital quite well (except some enlargement of the spleen) on the eleventh day. Not so luckily the other case terminated, though the patient—a merchant's daughter, aged twenty-six, of a middling build and nutrition—had taken only four drachms of the salt (also mixed with water, late in the night). Several hours after its ingestion, there appeared nausea, vomiting, diarrhoea, agonising abdominal pains, to which about the third day hiccough and severe headache, and still later on, also jaundice, intense itching all over the body, nasal bleeding, and general excitement added themselves. She was brought to the hospital not earlier than on the seventh day of the toxic symptoms. On admission, beside the symptoms just enumerated, there was found also suppression of urine, the daily amount being then only 100 cubic cc. (after a complete anuria during the sixth day). The urine was turbid, brown, acid, albuminous, of sp. gr. 1013, with epithelial cells, casts, and hæmoglobin. The girl died on the ninth day after her deed. On the *post-mortem* examination, there were found anæmia and oedema of the brain, slight oedematous infiltration of the lungs, with congestion of their lower lobes, transverse enlargement of the heart, with dark fluid blood in its cavities (as well as in systemic blood-vessels generally), a normally-sized but somewhat firm liver, slight enlargement, anæmia, and increased density of the spleen, with Malpighian bodies of the size of a millet seed, enlarged and flabby kidneys with congested pyramids. Under the microscope the renal vessels proved to be engorged with fluid blood. The epithelial lining of the straight and convolute tubules was opaque and granular, while their lumen was at many spots densely blocked up with a fine granular dark brown detritus, and fragments of red blood corpuscles. A similar fine granular *débris* was present also in the bone-marrow. The splenic blood vessels presented hyaline degeneration, while numerous splenic, as well as hepatic cellular elements, showed a fine granular disintegration in its various stages. Dr. Manotzkova thinks that her patient died from acute uræmia.

[In the *St. Petersburger Medizinische Wochenschrift*, No. 10, 1882, Dr. Lingen records the case of a student of the St. Petersburg Mining School, aged eighteen, who, when suffering from catarrhal angina, tried to treat himself by assiduously gargling his throat with a saturated solution of chlorate of potash. Since the unfortunate youth regarded

the salt as a quite harmless substance, he not only retained the gargle in his mouth and pharynx for a long stretch of time on each occasion, but even swallowed the fluid, in which, in addition, "a mass of fine crystals of the salt was suspended." Within a few hours since the beginning of this self-treatment, there appeared intense cyanosis of the integuments and mucous membranes, weakness of the cardiac action, incessant nausea and vomiting, general excitement, extreme anxiety and oppression, prostration, and intense albuminuria, with broken-up red blood corpuscles in the urine. Later on, the latter abounded also with blood casts and epithelial cells of the renal pelvis, while there supervened sleeplessness, hiccough, backache, and pain in the renal regions. On the seventh day the patient died in collapse. No necropsy was allowed. Dr. Lingen thinks that the symptoms seemed to furnish a support to Professor Binz's view, according to which the toxic effects of KCO_3 depend upon a destructive (oxidising) influence produced by the salt on the blood in general, on hæmoglobine in particular.

Another fatal case of an accidental poisoning by KCO_3 in St. Petersburg is mentioned in Dr. Viatcheslav Afanasieff's valuable work ("St. Petersburg Inaugural Dissertation," 1885, pp. 72, with 9 figures), treating this important subject. No details are given, except that at the *post-mortem* examination the urinary tubules were found to be blocked up with blood casts and detritus. Dr. Afanasieff was able to collect from the international literature (British, American, German, French, and Russian) as many as fifty-one cases of the chlorate poisoning, with forty five deaths and six recoveries. As is known, the fact of the chlorate being a pretty powerful poison had somehow remained hidden from the professional eye up to 1855, when Dr. Chevallier published his sensational case of a Tulle umbrella maker. The man, having mistaken the chlorate for sulphate of magnesia, took twenty grammes, repeated the dose on the next morning, and died about the evening during an attack of violent general convulsions. In 1858, Dr. Fountain, of Davenport, a noble seeker of scientific truth, took about thirty or forty grammes of the salt, in order to study its biological action on himself. The martyr of science died from complete anuria and intense gastro-intestinal inflammation four days later. These two so striking cases opened at last a toxicological chapter in the literature of KCO_3 . They were soon followed by those of Kuester, Professor Jacobi, Marchand, Hofmeier, Wegscheider, Manouvrier, Billroth, Brenner, Baginsky, Gesenius, Satlow, Riess, Tillner, Bohn, Broesicke and Schadewald, Neuss, Leichtenstern, etc., as well as by special experimental researches carried out by Marchard, Bridges Adams, S. Lebedeff, Mering, Binz, Isambert, Podkopaieff, and Afanasieff. The latter author undertook his careful experiments (on ten dogs, in Professor N. P. Ivanovsky's laboratory) mainly with the object of studying morbid anatomic lesions brought about by toxic doses of KCO_3 . In three of the cases—in one of which ten, and in another six, grammes of the salt (dissolved in one hundred cubic centimetres of water) had been introduced into the peritoneal cavity, while in the third forty cubic centimetres of a 10 per cent. solution (four grammes of KCO_3) had been injected into the distal end of a divided femoral artery—a fulminant intoxication took place, the animals dying in respectively forty, eighty, and five minutes, with such symptoms as a sudden failure of the cardiac and respiratory action, vomiting, and collapse. In another group of three cases the animals died on the fifteenth, ninth, and seventh day, the respective total doses of the salt (administered internally) being 125, 49.4, and 50.4 grammes. A third group included cases of chronic poisoning, with total (internal) doses of 40.5 and 190.0 grammes, death ensuing on the seventeenth and fifty-ninth day. The outcome of Dr. Afanasieff's important researches may be condensed thus:—1. In *acutest* cases (*intoxicatio acutissima*), the cardinal changes are disintegration and dissolution of hæmoglobin, its transformation into a methæmoglobin-like modification, breaking up of red blood corpuscles, and an acute parenchymatous degenerative process in all parenchymatous organs of the body, "but especially in the nerve-muscular apparatus of the heart." Death is caused here by so profound a deterioration of the blood, and by cardiac paralysis. 2. In *acute* cases, simultaneously with the changes just stated, there takes place a gradual (but rapid) accumulation of the blood detritus in the liver, spleen, lymphatic glands, bone marrow, and kidneys. The urinary tubules become by degrees blocked up, and absolutely impassable, the renal (secretory) functions steadily fail, and the products of metabolism accumulate in the system, to rapidly give rise to an uræmic state. The fatal issue is accelerated by a swiftly progressing degenerative process in all parenchymatous organs, including the kidneys, where there are observed an acute exudative inflammation of the Malpighian glomeruli, with ever-increasing albuminoid deposits in Bowman's capsules, and an acute parenchymatous inflammation of the epithelial lining of all urinary tubules. 3. In *chronic* cases, there are met regressive and atrophic changes in the organs named above. In the kidney, a parenchymatous inflammation of the epithelial covering of urinary tubules and glomeruli is soon followed by intense and extensive

interstitial inflammatory changes, death being caused by usual consequences of a true nephritis. 4. In *all* cases of poisoning by chlorate of potassa, the blood rapidly assumes a most characteristic chocolate colour. The same discolouration, however, is caused also by chlorate of soda, and by all chlorates generally, and seemingly also by nitro-benzol. Dr. Afanasieff emphatically draws the attention of the profession to the powerful toxic properties of the drug which finds so extensive a use in the daily medical practice, and is still regarded by the non-professional public, and even by an average practitioner, as a pretty "innocent" chemical compound. Like Professor Th. Husemann, the author urges that the maximal internal dose for an adult must not surpass two grammes *pro dosi*, and eight grammes *p. die*. How freely the salt is employed by the community in Russia one might judge from the fact that two of the St. Petersburg chemist's shops sell, without any medical prescription, each from 240 to 280 pounds of KCO_3 yearly. In the *Fortschritte der Medicin*, September 1st, 1883, the editors, referring to an alarming enrichment of toxicological casuistics with new and new instances of the chlorate poisoning, recommend the utmost caution even when the drug is used as a gargle. The solution must be labelled—"Caution!" The practitioner must invariably warn the patient and his friends in regard to grave consequences which might follow his swallowing the gargle, etc. In the *Vrätch*, No. 37, 1883, p. 592, Professor V. A. Manassein emphatically endorses that recommendation, and in addition, strongly advises "to altogether discontinue any internal administration of the drug; for, generally speaking, there do not exist any serious or firmly-established indications for its use in that way."—*Reporter*.]

III.—EXTRACTS FROM SPANISH AND OTHER MEDICAL JOURNALS.

TRANSLATED BY DR. G. CADOGAN-MASTERMAN.

Fracturas del Cráneo. By Dr. D. Enrique de Areilza, Barcelona, 1887.—The series of articles on "Trephining in cases of Fracture of the Skull," published in the *Revista de Ciencias Médicas*, and of which a summary appeared in the April, May, and June numbers of this journal in 1887, has been published by the author in a collected form, and two cases added of great interest—the first especially so from its bearing on the operative treatment of epilepsy, and some unusual phenomena during anæsthesia. Severo González Gil, thirty-nine years of age, was struck on the forehead by the stopper (*obturador*) fired from a fowling-piece, over the right eyebrow, two centimetres above the edge of the orbit, in the year 1876. The medical men who then saw him found a contused wound and an evident depressed fracture of the skull, but as the symptoms seemed to belong to the wound only, they contented themselves with allowing it to heal without raising the bone. Ten days afterwards, although fever set in with furious delirium, the same gentlemen still declined to meddle with the fracture; but under the customary purging and salines the meningitis subsided, and the man returned to work with no other trouble than occasional convulsive attacks, which, slight and infrequent at first, gradually developed, however, into well-marked epilepsy. For the last ten years they had continued with variable duration and intensity; for the first seven always in the night, and never more than once a month, then for a time more frequently and severely, but only to disappear apparently altogether; but during the last two years the fits had been extremely frequent, until at last they recurred daily, and in a most distressing form. During this long period the man had been under treatment, both at home and in hospital, at Madrid and Zaragoza—always, however, for the induced epilepsy, never for its causal injury.

When he came under the care of Dr. Areilza in November, 1886, the attacks were diurnal, and were accompanied with great restlessness; sleep was disturbed by terrifying dreams, and when awake the man was incessantly champing his jaws. At the moment of attack he would become suddenly cyanotic, the whole body fixed and rigid—on the right side first—then he would give a piercing shriek, and fall to the ground insensible. In a short time the blueness of the skin would be succeeded by extreme pallor, and the tonic contraction give way to violent convulsions, the lips were covered with yellow foam, and the tongue often severely bitten. There was also a convulsive cough, with spasm of the larynx, dyspnœa, and evidence of semi-asphyxia, which passed into quiet lethargy, from which the patient gradually recovered, complaining of intense headache. The cataleptic condition lasted but an instant, the convulsions for a quarter of an hour, and the lethargy about as long. In spite of these frequent attacks, the man's general health was good, but his character was completely changed; he became constantly more irritable and violent in temper. An operation was proposed as the only rational treatment, and after some demur he consented to it. This procedure was found, however, much less simple than was expected from the impossibility of getting him quietly under the influence of chloroform, as will be explained presently. The site of the injury was about the

size of a florin, half an inch above the eyebrow, and the same from the middle line. The skin was wrinkled around and adhered to the bone. A semicircular incision was made, the base upwards, and the pericranium forced off until the edge of the fracture could be seen. The trephine was applied there, and a disc of compact bone removed in two pieces, but the gouge and mallet had to be used before the *dura mater* was exposed. This was found to be uninjured, but thickened and opaque, as if from old inflammatory mischief. The wound was washed with phenol lotion, and the flap replaced with Lister's dressings over it, and a small drainage tube inserted, and it had soundly healed in eighteen days.

Results.—Before the operation the fits recurred daily, and lasted half an hour. During the first month afterwards there was once a very slight attack with cramps in the feet, but without loss of consciousness. In the four following months there were again attacks, but extremely slight and of short duration; and, therefore, it may be reasonably expected that if the epilepsy do not disappear altogether, it will have been greatly ameliorated in all respects. But a disease which had lasted ten years must have made the habit almost inveterate; and even if the original cause were entirely removed, we might expect the profound impression made upon the brain to remain. And the thickened and altered *dura mater* might alone be sufficient to perpetuate the influence of the primary cause. The man is still under medical treatment, with the hope of eradicating these last traces. He has a draught of infusion of valerian every morning, two milligrammes of atropine during the day, and six grammes of bromide of potassium at bed-time, and this is to be continued for some time to come.

The difficulty in inducing anaesthesia has been mentioned. On November 16th he was first brought into the operating theatre, and pure chloroform carefully administered, and he quickly became insensible; but in a few minutes violent tetanic convulsions of the whole body set in, with a suffocative cough, retraction of the tongue, cyanosis, and apparently, imminent asphyxia. The tongue was seized and pulled well forward, and then, as the breathing had become tranquil, the inhalation was recommenced, but with the same results. It was suspended, the fauces well cleared, and then resumed for the third time, when, in consideration of the alarming symptoms of suffocation, and the fact that more than four ounces (130 grammes) of chloroform had been consumed, the operation was deferred until the following day. It was noticeable that the pulse was little affected, only becoming weaker and more rapid when the breathing was interrupted. As a possible preventive of these troubles ninety grains of bromide of potassium were given at bed-time, and two-thirds of a grain of morphia injected just before recommencing the operation. Another sample of chloroform was used, and of that five ounces were expended. But all in vain: the same violent convulsions came on, alternating with impending asphyxia; and it was only by seizing now and then a few minutes of calm between the two conditions, and after twice repeating the injection of morphia, that the operation was completed in an hour and a half, under what Dr. Areilza pathetically calls "*malisimas condiciones*," and he may well be congratulated on his coolness under these trying circumstances. At the end of the operation the patient was as excited as ever, in spite of having taken within twenty-six hours nine ounces of chloroform, ninety grains of bromide of potassium, and two grains of morphia! and yet he made an excellent recovery. This remarkable resistance to the ordinary action of anaesthetics—in fact, a reversal of their usual effects upon the medulla oblongata—must have been due to some subtle change in the brain, which either induced the epileptic attacks or was produced by them. Chloroform in the first case paralyses the higher intellectual centres, then the sensory, and almost simultaneously the motor, and finally, those of organic life. In this case the first stage was normal; but in the second, instead of an inhibitory influence, one of intense excitement was produced, and as we sometimes see when administering chloroform, and when the patient begins to feel its effects, there were violent convulsions in place of muscular relaxation, and the more the agent was pushed the more severe these became, until the respiratory and cardiac centres being reached, impending asphyxia compelled its withdrawal.

"If we were to accept the theory of Schroder van der Kolk as to the cause of epilepsy, strengthened by the discovery of the convulsion-centre in the protuberance of Nothnagel, the link would be obvious enough, for the epileptic convulsions set out from the same centres as are (in our patient's case) irritated by the chloroform. But this hypothesis falls to the ground before the modern view, supported by so many clinical observations—that epilepsy originates in the cortical layer of the hemispheres, and it has been shown by experiment that irritation of the surface of the frontal and ascending parietal convolutions will produce convulsions; and in this case the site of the injury was over the root of the first and second frontal folds. We may say, however, that although the cause of the epileptic attacks is to be found in the cortical layer, that the mechanism of the discharge lies in the protuberance, and we may imagine that this mechanism had been so deranged by incessant disturb-

ance that chloroform acted upon it like a fresh irritant, in place of an inhibitant; and that even now the thickened *dura mater* can provoke slight explosions, although their main cause has been entirely removed."

CASE B.—The interest of this case lies in the fact that the middle meningeal artery had been ruptured, and that an enormous clot was compressing the brain into a coma, which must soon have been fatal but for operative interference, and in showing how in traumatic apoplexy life may be occasionally saved by boldly opening the skull and removing a coagulum, without that fear of secondary hæmorrhage which generally restrains the surgeon's hand.

Martin Galbete, aged thirty-two years, received a violent blow on the head with a stick on the night of the 8th of September, 1887. He fell heavily to the ground at once, inert and insensible. A practitioner (the quiet sarcasm of *un señor médico* is lost in translation) was called, who applied leeches to the mastoid processes, blisters, and other approved remedies of the *dolce far niente* type, but the patient was ungrateful enough to remain senseless; so he was removed to the hospital five days after the infliction of the injury. He was still quite insensible, except that in recognition of loud talking he uttered some incomprehensible sounds. The expression was stupid and vacant, as if from double facial paralysis; the immovable and half-open lips allowed the constantly-secreted saliva to dribble away; and the nearly-closed lids just showed swollen blood-shot eyes, with both pupils fixed and somewhat contracted. He moved incessantly the lower limbs and the left arm; the right was passive, but not paralysed, nor was sensation abolished. Pulse seventy, temperature normal, respiration rather hurried. On the left temporal region there was a contusion, slightly swollen and cedematous, but the skin was not broken, nor could any fracture be made out. However, there was no time to be lost, so, after a few whiffs of chloroform, which tranquillized the patient, an incision was made through the whole length of the infiltrated swelling to the bone, where a fracture could be felt, which a second incision at right angles to the first revealed as an enormous depression in the inferior region of the parietal of semi-ellipsoidal form, with fissures running across the bone and into the temporal. With a gouge and cutting pliers the fragments were raised and divided, leaving an opening 3.5 inches long and 1.25 inch wide. The *dura mater* could not be seen, only a mass of blackened blood clot, tough and resistant, evidently due to rupture of the middle meningeal artery at the moment of the blow. With a flat curette and the fingers the greater part was cleared away, but the membrane could not be quite exposed without using an amount of force which would have probably torn it. Altogether, more than 100 grammes (three and a half ounces) of clot were removed, and a cavity about two inches deep remained. The clot extended far under the uninjured vault, but the point of greatest compression corresponded to the Broca's circumvolution, the third inferior frontal and the ascending parietal. The wound was washed with carbolic water, a large drainage tube inserted, the scalp sutured with wire and covered with Lister's dressings. There was an immediate change for the better, and the improvement went on so rapidly that in two days the patient had recovered full consciousness, speech, and muscular control. The wound healed by first intention, excepting in the space occupied by the drainage tube. There was no rise in temperature, and at the end of September (fifteen days after the operation) the man was discharged cured.

Before commencing the operation, the fact of past severe internal hæmorrhage was patent, and the probability that an attempt to remove the clot would lead to its return. Hence the advice of Dessault, Malgaigne, Tillau, and others, to do nothing in these cases; but then, that would be simply to leave the man to die. And, on the other hand, the delay in this instance was really advantageous, since it had lessened the chance of secondary bleeding, although it had increased the probability of cerebral mischief.

A variola em Lisboa—the Epidemic of Small-pox in Lisbon (*A Medicina Contemporanea*, Lisbon, January 15th, 1888).—In spite of the efforts of the Government and of the profession in Portugal, there is still there great popular prejudice against vaccination, a feeling which is now being combated by the establishment of an institution for the cultivation of calf-lymph, which seems to be most admirably arranged and conducted. The deaths from small-pox in Lisbon alone reached fifty-eight in the first fortnight in November, a figure which would be greatly increased if the provincial mortality were added. It had fallen, however, to fourteen in the first half of January. In Spain it has been far worse. In Madrid, during the months of November and December last, 300 persons, it is stated, died from the disease. In Spain, as in Portugal, every facility is given for gratuitous vaccination, but it has not been made compulsory. In both countries there is but one opinion on the subject amongst the profession, and generally amongst the higher classes also; but the lower, although not influenced by any organised opposition to vaccination, as in England, think more of the certain inconveniences than of the protection from an uncertain evil.

IV.—INTERNATIONAL MEDICAL CONGRESS.

GYNÆCOLOGICAL AND OBSTETRICAL NOTES.

(Communicated.)

(Continued from page 91, February, 1888).

WHY should America stand so high in gynæcological work? A difficult question to answer; but whatever explanation be offered, she does at present, as in the past, take a leading position in all that relates to the diseases of women. American women appear to require the services of a specialist pretty frequently; the demand creates a supply. One orifice, with its armature, the mouth, is especially protected and cared for in the States. Teeth are valued. American dentists lead the way. The other orifice, with all its hidden organs, must require as much care; and American women, practical and without *mauvaise honte*, find that it is well to have this orifice explored and kept in order. Is this the explanation? I need not defend this hypothesis.

Knowing the past work of America in the field of obstetrics and gynæcology, I naturally looked forward with interest to the sections devoted to these subjects at the Congress, and if you will allow I will give you my impressions, and a précis of what took place. Which section shall I take first? I think I shall ramble about from gynæcology to obstetrics, and work in a little bit from each.

The Section of Gynæcology was presided over by an accomplished gynæcologist, Dr. H. O. Marcy (Boston), and was fortunate enough in securing as secretaries Dr. G. Apostoli (Paris), Dr. S. N. Nelson (Chicago), Dr. E. W. Cushing (Boston), and Dr. Van Lawren (Hampover). In looking round the assembly I noted some well-known men from different countries; and taking particular stock of the Americans, I did not see, as regards appearance, much difference from an ordinary meeting of one of the London Societies. Amongst the papers read on the first day was one read by Nathan Bozeman, **On Artificial Draining of the Bladder, Kidney, and Uterus through the Vagina, with and without graduated pressure, in the treatment of Vesical and Persistent Fæcal Fistulæ.** According to the author, this method prevents the discomfort from incontinence of urine and improves the condition of the surfaces from operation. There was a good discussion on a paper by Dr. More Madden, of Dublin (read by Dr. Cushing), **On Sterility.**

Dr. Gordon, Maine, said cases were rare in which obstruction was too great to permit passage of semen. *Dyspareunia* is most important. It is well to look after the soil, chronic congestion destroying the soil. Dr. Graily Hewitt did more than any other to make known and correct this, and showed that it was only relieved when the uterus was placed in a proper position.

Dr. Graily Hewitt said that he applied Hodge's principles of retro-uterine support to the anterior displacements. He thought the method of dilatation merely straightened the canal; that lymph was exuded before and behind, placing the uterus in a splint, thus giving more ready egress and ingress to the fluids.

Dr. Duncan adopts dilatation but calls it canalization.

Dr. Laphort Smith, of Montreal, says the other side of the house should not be neglected; that often the woman is persecuted in various ways, when it is found subsequently that there is not a spermatozoid in the semen.

Dr. Nelson, of Chicago, says the mucous membrane must be capable of normal congestion in order that the ovum can secure a lodging place.

Dr. Garnet read for Dr. Bigelow (Boston) a paper on **Conservative Gynæcology.**—It was a general plea for more conservative measures, and the author seemed to favour the idea that there were too many operations performed. The treatment of myoma was the subject of several communications, and the section was very much interested in Apostoli's paper on **Faradisation in Gynæcology.**—His views were generally supported.

Dr. Franklin Martin read a paper on **Electrolysis in Uterine Myoma**, in which he spoke of the value of strong currents and exact dosage.

1. The local effects of the poles produce a kind of cauterization, acid or alkaline, according to the pole.

2. Atrophic effect. The results of a peculiar irritation upon the trophic nerves.

3. Electrolytic action.

4. Anti-neuralgic effect.

He does not use electro-puncture, believing it dangerous. He showed a number of ingenious electrodes, and recommends a dynamo instead of the cell battery. In conclusion, he said its advantages were:

1. It is entirely free from danger.

2. It is absolutely painless.

3. It invariably checks excessive hæmorrhage.

4. It rapidly reduces the size of the tumours.

5. It stops neuralgic pains.

6. It is a system of treatment of fibroid tumours by electricity based upon principles which make exact dosage possible.

I think one of the most characteristic papers of the meeting was read by Dr. Dunlap, who may be regarded as the successor of McDowell, and who brought us back to the early days of ovariectomy, when he described his early operations performed under great difficulties. It seemed almost incredible to think that the report of one of his early cases was refused publication in one of the medical journals of the time. Another pioneer was present, in the person of Dr. Kimball (Lowell, Mass.), who narrated his experiences, and told of the difficulties he had forty years ago. In one case he had invited a number of assistant surgeons to see the operation, and help him, but as he had to proceed slowly, owing to adhesions, when he looked round for his assistants, all had departed save one. We can hardly imagine at the present day the opposition there was to ovariectomy at its inception, but we may form some slight idea of it, if we pursue some of the literature connected with some of the modern operations for the relief of the unfortunate women suffering from diseased ovaries and tubes. Speaking of operations, I may here allude to a discussion which took place in the section of obstetrics on a paper by Professor Wathen **On Cæsarean Section** (published in the *Provincial Medical Journal* in full, November, 1887, page 487).

Prof. A. R. Simpson, of Edinburgh, opened the discussion. He did not think that the time had yet come for the general practitioner to throw away the instruments for craniotomy, which he had become accustomed to. In Edinburgh the cases requiring breaking up of the head have, in recent years, become very unusual. If the condition of the woman before labour can be carefully studied, and a favourable opportunity for the operation selected, Sænger's modified operation certainly promises the best result. Porro's operation is indicated if there is grave disease of the uterus, which can perhaps be cured at the same time.

Dr. Martin, (Berlin) said that he had seen many operations according to the old method. Sænger's modification enables us to form a new judgment concerning the operation. It is now a safe procedure. Not every practitioner, however, can do the operation in the backwoods without preparation and without assistance. Moreover an effort should be made to deliver the child *per vias naturales*, if the pelvis is not too greatly contracted, before resorting to laparotomy. If there is no hope of delivering the child alive through the pelvis, there is at present a disposition to do either the modified Cæsarean or Porro's operation. Both are justifiable. The former holds out hope of perfect recovery, the latter removes hope of subsequent pregnancy. In cases of tumour—fibroid or epithelial—either Porro's operation or total extirpation of the uterus may be indicated.

Dr. Johnston (Washington) desired to emphasize the remarks already made, that the great causes of failure were delay in beginning the operation, and the making trial of other operations in the hope of avoiding an abdominal section, so that the patient succumbed as a result of former unsuccessful attempts at delivery, rather than of the last operation. He reported the case of a woman in whom he had performed the Cæsarean section after the woman had been in labour three days. Unsuccessful attempts to deliver with the forceps, as well as by turning and craniotomy, during which she had been under ether four hours, had been made. During the operation the uterus was found to be badly bruised. The woman died on the tenth day of an abscess on the left side, which had ruptured into the peritoneal cavity. Perhaps a Porro operation might have saved her. It is necessary to increase our knowledge of pelvimetry. It should be remembered that most of the foreign statistics relate to operations done by men who were already extremely skilful laparotomists.

Dr. Ball-Headly, of Melbourne, Australia, said that Dr. Greenhaugh, of London, was perhaps the first who had performed Cæsarean section in a case of epithelioma. Total extirpation of the uterus is often preferable in these cases at the present time. Twenty years ago he knew a German practitioner who lived in a region where very many women had soft bones, and who did Cæsarean section very frequently (and sometimes repeatedly on the same woman), and with very few deaths. He himself had done a Porro operation upon a dwarf with an entero-posterior diameter of one inch. The operation was exceedingly easy, having been completed in twenty-five minutes. It was not pleasant to be obliged to operate if the tissues were bruised.

Dr. J. A. Doleris, of Paris, agreed with preceding speakers, and discussed the technique of different operations.

Prof. W. W. Jaggard spoke of the relative indications for craniotomy and laparotomy. He argued that the former did not require extraordinary skill, was comparatively safe, and was preferred by the mother. He thought the present interest in delivery by laparotomy was largely based upon sentimentality, or, to call it by a more pleasant name, upon scientific interest. The life of these children is not of great value.

Prof. Lusk controverted these propositions. When the antero-posterior diameter is under three inches seven centimeters, craniotomy is not, as a rule, safe or simple. In contracted pelvis the Cæsarean section is ordinarily no more dangerous than craniotomy. The children do not, as a rule, die under twelve days.

Back to gynecology again for a paper by Professor Martin on **Vaginal Total Extirpation of the Uterus for Cancer**.—Professor Martin asked: (1) Is this operation practicable with such success, that it promises good results in the hands of others than a few specially successful operators? (2) Does it give permanent results superior to any other treatment of cancer employed at present?

Meagre and isolated reports of this operation are only to be found in English and German papers, though it has obtained recognition in Germany. The results have improved:

1881.	Olhausen collected 41 cases, with 29 per cent. mortality.
1883.	Sänger " 133 " 28 " "
1884.	Engström " 157 " 29 " "
1886.	Hegar " 257 " 23 " "

Up to 1886 the following total extirpations have been performed for carcinoma:

Fritsch	60 cases; 7 deaths.
Leopold	42 " 4 "
Olhausen	47 " 12 "
Schröder	74 " 12 "
Stande	22 " 1 "
Martin ..	66 " 11 "

311 47

A mortality of 15.1 per cent. Are we not justified in hoping for a lower mortality in the future, with improved methods and experience? Yes. This operation ranks well with the other methods. Dr. Martin's recommendation is clear and emphatic: "I recommend," he said, "vaginal extirpation of the uterus as the operation and as the means, which we ought to apply in case of cancer of the uterus, as long as the disease is limited to the uterus itself."

So much for one side of the question. Dr. Reeves Jackson (Chicago) presented another aspect, and taking Dr. Martin's figures, he draws a picture which might well make surgeons hesitate before performing this operation—viz., extirpation of the uterus. "I have for a long time believed that statistics upon this subject are unreliable, and that if the whole truth were known, the results of the operation would be more unreliable than they now appear. In order to test this opinion I have recently obtained the histories of seventeen cases of vaginal hysterectomy for cancer in Chicago. Of seventeen cases nine were promptly fatal; one lived six months, one two years, and one three years and eight months. The remaining five are still living, the operations having been done seven, five, four months, and one five weeks ago. Of the seventeen cases, with a mortality of fifty per cent., two only have been published."

In reply to the two questions asked by Dr. Martin, he replied: Dr. Martin does not hesitate to answer his first question in the affirmative, and instead of giving the results of the work of the "others" in support of his position, he only furnishes those of the especially successful operators of Europe, a method of argumentation calculated to mislead, because based upon only a partial presentation of the facts. This, at least, seems clear. If the 311 cases given in Dr. Martin's table show an immediate mortality of only 15.1 per cent., it follows that the mortality of the "others," which has been estimated at about twenty-eight per cent., must be very much higher than has been supposed. Thus, Dr. Martin's statement of data seems to contradict the correctness of his conclusion. In reply to Dr. Martin's question, "Is there any other method of treating cancer which, with so small a mortality, can show equally good results?" I answer unequivocally in the affirmative; Dr. Martin believes otherwise. I beg to offer the following conclusions: (1) Cancer of the uterus is originally a local disease, and is curable by complete removal. (2) Any operation for cancer which does not completely remove the disease will be followed by recurrence. (3) The extent of cancerous disease originating in any part of the uterus cannot be known prior to or during operation, hence no operative procedure can afford a guarantee of complete removal or of immunity from recurrence. (4) In the radical treatment of uterine cancer the most favourable results, both immediate and remote, have been obtained by the amputation of the diseased portion by means of the galvanocautery, the hot iron, and the knife. (5) Kolpo-hysterectomy is more dangerous, and has given worse results than any other mode of treatment. It has destroyed, and has not saved life.

It is an injurious, and not a useful operation; it is more rapidly destructive of life than the disease against which it has been used. Hence it should be condemned as unjustifiable. There was a good

discussion on these two papers. Dr. Dirner, Buda-Pesth, said: Humanity commands us to execute total extirpation of the uterus, but only in cases where we are sure of being able to remove, as far as possible, all morbid matter, and when we have at our disposal the experience and skill necessary for the operation. Patients with cancer are shipwrecked and condemned to death. Such shipwrecked lives may be saved. Those who survive after the operation in some cases enjoy life for a short time, others have their lives preserved. Should we save but even one life we do well. Dr. Palmer Dudley, New York, joined in the discussion, and pointed out that in the sixty-six he had reported, there had been thirty-three different operators, with a mortality of forty-four per cent.; whilst, in sixty-six cases reported by Dr. Martin, done by himself, there had been only eleven deaths. American surgeons have not had a fair trial, but he felt certain that, with increased skill and experience, they would be able to show results as good as those of Dr. Martin. Dr. Graily Hewitt said they were indebted to Dr. Martin and his colleagues for their work and for their advances in the operation. A few years ago, at the Obstetrical Society of London, he was the only speaker who did not condemn the operation.

(To be continued.)

V.—DISEASES OF WOMEN AND CHILDREN.

Laparo-Salpingotomy done in 1784 in Russia.—M. Schlisinger in the *Rev. de la Soc. d'Obst. et de Gynec.*, No. 3, cites a case of laparo-salpingotomy done by Seydel in 1784 in the manner which is now known under the name of Volkmann. The patient was a woman of forty-two, a multipara, who had a miscarriage two years before. In the summer of 1783 she presented herself with a round hard tumour in hypogastric region towards the right side. It had the appearance of the gravid uterus at the third month, and as time went on it kept increasing in size. At the menstrual epoch it was the seat of sharp, shooting pains. At last it attained the size of a two-year-old child's head and became more mobile. Vaginal examination showed the tumour to be attached to the uterus by a short, hard pedicle. The patient was prepared for operation by baths and the administration of gentle purgatives and Peruvian bark, while just before the operation she was given some laudanum with syrup of white poppies and Hoffman's anodyne. The operation was performed February 21st, 1784, at Sarepta in Astraken. An incision was made, right over the centre of the tumour, extending from the umbilicus to the right inguinal ring and the peritoneum was opened with a curved, blunt-point bistoury guided by the finger of the operator. Three veins were ligated. The intestines were protected by towels soaked in tepid milk. The tumour presented itself and was opened giving exit to at least a pound and a half of chocolate-coloured, odourless, thick, sticky liquid. The operator then perceived that it was not a tumour of the ovary but of the tube. After evacuation of the sac the operator poured into it some decoction of Peruvian bark, some solution of myrrh, and then introduced a coil of lint steeped in the "balm of Arceus." To prevent adhesions between the peritoneum and intestines they were separated by strips of muslin dipped in oil of roses. The wound was dressed with linen and a plaster; later it was sutured. During the first few days the surgeon evacuated the fluid by means of a silver tube; but later, as the discharge slackened, the operator sucked out with his mouth a thick, fetid liquid. There was some fever for seven days, but none at the end of the fortnight, when the discharge had ceased, the wound healed and the patient was well. Two years later she still enjoyed perfect health. [Translated for the *Gaz. Hebdomadaire des Sci. Med. de Montpellier*, January 7th, 1888, by Mme. Al. Tkatcheff—*Med. Analectic*, February, 1888.]

Acid Lactic in the Treatment of Ulcer Exedens of the Vulva (*Gazette de Gynecologie*, p. 46).—Dr. Cheron praises the effects of lactic acid in the above condition, scarification, sulphuret of carbon, and iodoformed carbon. The resolvent action of the sulphuride of carbon is marked on the indurations. Dr. Cheron also uses—

Acid lactic..... } Equal
Distilled water..... } parts.

Applied locally, and he speaks well of its effects.

Painful Dyspepsia in Uterine Affections (*Ibid.*).—Dr. Menière frequently employs the following mixture for the above; the action, he says, is rapid:

Bromide of sodium..... 4 grammes.
Tinct. aconite..... 1 gramme.
Tinct. nux vomica..... 15 drops.
Chloro-hydrate of morphine..... 0.03 centigrammes.
Simple syrup..... 15 grammes.
Elixir of garus..... 20 "
Distilled water..... 60 "

Take a desert-spoonful before each repast.

Atony and Constipation in Uterine Affections (*Ibid.*).—The digestive apparatus is frequently troubled when uterine disturbance is present. Bardel proposes the following laxative stomach mixture :

Fluid extract of cascara sagrada	....	20 grains
Tinct. nux vomica	.....	2 "
Hydrolate of laurocerase	.....	15 "
Distilled water	.....	100 "

Mix three or four desert-spoonfuls daily.

Treatment of Vegetations in Pregnant Women.—The physician is frequently consulted by pregnant women, who complain of having what they called little excrescences on their external genital parts. These vegetations have no relation with syphilis. They are generally discrete, and without inconvenience, but sometimes they become confluent, and of large size, and owing to the odour are unpleasant. Almost all accoucheurs advise not to touch them, as they generally disappear after confinement; or most advise interference when they assume considerable proportions. M. Decoster is of opinion that they ought to be energetically treated before labour, as he says they may give rise to hæmorrhage, may become the seat of micro-organisms, and may give rise to lymphangitis, septicæmia, and peritonitis. M. Decoster recommends cauterisation, with nitrate of silver. We agree with Dr. le Page, that it is best not treat these vegetations unless they are of considerable size, or cause grave inconvenience. This is the opinion of Tarnier, Cullerier, and Budin.

Water as an Antiseptic.—Dr. Menière says the accidents occasioned by phenic acid, iodoform, and sublimate are so frequent, and so well known, that the surgeon had better use simple water after filtration and ebullition, at 100 or even 120. It is the best aseptic we have at our disposal. For two years he has used boiled water for hypodermic injections of hydro-chlorate of morphine. We believe that the custom set in England by Mr. Tait of using water will be followed by most gynæcologists.

Hybrid Gonorrhæal Affection in Women (*Annales de Gynécologie*, page 371).—Bumm (Wurzburg) understands by hybrid infection the introduction of two kinds of organisms. The habitual process is as follows: One of the species creates in the organ on which it acts a morbid state, and then on this prepared ground the second species takes up its domicile. Thus a lung attacked by pneumonia is very accessible to the bacillus tuberculosis. A similar process takes place in gonorrhæal infection in women. Micro-organisms of suppuration come subsequent to the gonococcus of gonorrhœa.

Tait's Operation for Perineorrhaphy.—At the meeting of the German Physicians and Naturalists at Weisbaden, 1887, Sängser said, he had recourse seventeen times to this operation: seven times for prolapse, three times for complete rupture, seven times for incomplete, with excellent results. Sängser said that the simplicity and rapidity of the operation recommended it, and that the method represented a grand progress in perineoplastic operations.

VI.—PUBLIC HEALTH.

Report on the Cholera of 1883 (Translated from the *Muqtataf*, February, 1888).—When cholera broke out in Egypt in 1883, several European Commissions were sent by their governments to investigate as to the nature of the epidemic on Egyptian soil. The German Commission, headed by the celebrated Dr. Robert Koch (well known to our readers by his discovery of the bacillus of tubercle, and of the comma bacillus of cholera), was among the most prominent. It left Berlin on August 16th, 1883, and arrived at Alexandria on the 24th of the same month, after visiting Port Said on the previous day. In Alexandria preparations were soon made for carrying out a thorough investigation, and expeditions were afterwards made to Damietta (where the epidemic first broke out), Mansoura, Tanta, Cairo, and other places. Having completed its work so far as Egypt was concerned, the Commission went to India, where further investigations were made; and after returning to Berlin, it prepared the elaborate and exhaustive report which was published, with many plates and maps, at the expense of the German Government.

In perusing this report, the reader is struck by the ingenious way in which the narrative of a journey, and the description of views of towns and countries, are so well and easily connected with deep research and severe criticism, in a dry and uninteresting subject to the general reader. Our space is very limited, so that we can only give the bare outlines of the report in as far as it concerns Egypt, leaving unnoticed the other not less valuable parts of the report on Quarantine in Egypt and the Red Sea, Cholera in the Hejaz, and Cholera in India. A good description of Damietta, and of its sanitary state previous to the outbreak of cholera, is given, and the beginning of the epidemic there is described as far as it could be traced. The different views on the

origin of cholera in Egypt are then brought forward, and the reports of Dr. Shaffi, Dr. Terrari, Dr. Dutrieux Bey, and Surgeon-General Hunter (who was then sent by the English Government) are examined, and the untenability of their views—views that are already well known to our readers—is lucidly shown. A table taken from Dr. Grant Bey's report on the cholera of 1883 (*British Medical Journal*, February, 1884) is added to corroborate the view that Asiatic cholera is not endemic in Egypt.

In treating of cholera in Cairo, the report shows clearly how little care was taken to keep the potable water of the town free from impurities and germs of disease. Much has been taken from the reports of Dr. Ahmed Bey Hamdi and Dr. Wild in support of that (to us) undoubted fact. In Alexandria, as well as in other Egyptian towns, the dirty state of the roads and dwellings, as well as the bad sanitation, are not lost sight of; and the zeal of some doctors—as Dr. Kartulis—to facilitate scientific research is highly spoken of. A chapter is devoted to the comparison of the epidemic of 1883 with former epidemics in Egypt, and especially with that of 1865. There are altogether six epidemics¹ of cholera on record in Egypt, all of which broke out either in June or July of the years 1831, 1838, 1850, 1855, 1865, and 1883, the last following after eighteen years. Among the most valuable contents of this report is a chapter on the Nature and Cultivation of the Cholera Bacillus, of which we may give an extract by and by.

This report of the research of one of the greatest authorities on the Asiatic cholera—which refers to so many Egyptian doctors, opposing the views of some, and upholding the views of others—cannot fail, we think, to raise as much discussion among our doctors as it will do among European doctors. Dr. Grant Bey, who so zealously upholds the view here that cholera is not endemic in Egypt, and who, some two years ago, challenged his opponents to a discussion on the subject in a severe criticism of Drs. Shaffi's and Ferran's reports, and of Dr. Hassan Pasha Mahmoud's article on Cholera, as was then published in this journal, may now expect to find his challenge—hitherto not responded to—accepted by the opposing host that ought now, if ever, to send out its champion to meet him in the field of conflict. Surgeon-General Hunter's views are terribly shattered in this report; and Dr. Mackey, of Alexandria, who is there represented as "chiming in" with these views, can hardly be expected to "chime" in silence now. The question is not settled yet, as the other party has, no doubt, still somewhat to say in support of its views.

The Spirit of the Societies.

LIVERPOOL MEDICAL INSTITUTE, January 19th, 1888, Dr. WILLIAM CARTER (President) in the chair. **Discussion on the Routine Excision of Joints.**—Mr. ROBERT JONES introducing the subject said that it was necessary to protest against a recent revival of excision in early joint disease, and agreed that the resort to early operative measures was proof that the correct principles of treatment were not understood. He stated that it was of immense importance to detect early disease, and to treat in such a manner that if it became serious no change of principle would be of use. There should be no difference in the theory of treatment in the case of a knuckle to that in the case of the hip. Suitable mechanical appliances should be fixed, so as to secure the utmost rest without compressing the diseased areas. Mr. Thomas's appliances best secured these ends. Mr. Robert Jones took as a sample the case of a knee which was supposed to be inflamed. Having secured it in a splint, he considered the effusion. If sensitive, he recommended an ice bag so slung as to give rise to no appreciable weight. He aspirated if, in a spontaneous collection, no diminution occurred in ten days. In the case of hæmorrhage, he advocated early aspiration to be repeated when necessary. If effusion, no matter what its character should give rise to, acute pain, or fever, aspirations should be insisted on. Two points were to be regarded in aspiration. (1) Not to operate until the knee was fixed in splint. (2) Not to use too fine a bored needle, lest prodding should be encouraged when the surgeon failed to get pus. It was not uncommon for him to aspirate once a week in certain cases for lengthened periods. If pus were thick or cheesy, or if constitutional symptoms arose, incision should be discussed. Personally he did not employ Listerism, as the lengthened time abscess took to heal only convinced him of the value of the simplest dressings. He thought drainage of more importance, and to see to the opening being in the most dependent spot. He strongly condemned transfixing the joint with drainage tubes. Incision should at once follow and check the ramification of abscess cavity. It was often necessary to wait long

¹ The suppressed report of the British Consul gives a seventh epidemic of cholera in 1837.

and patiently for improvement, and not to be deterred by retrogressive tendencies on the part of the joint. The vast majority got well if waiting were sufficiently long. Some recovered maimed, and a large proportion of even the worst cases finally attained movable joints. With the disappearance of pain and fever, let them don a walking splint so constructed as to allow progression and disallow articular motion. Country air worked wonders on their constitutions. He had many such patients with discharging sinuses living in country places who did not need to be seen for months at a time. The joint should be imprisoned long after the appearance of disease has gone. The knowledge whereby a joint can be affirmed recovered was very necessary, and was only in very vague terms referred to in text books, and that not correctly. It were as necessary to detect recovery as to detect disease, and the want of this knowledge accounted for the frequent relapses. Mr. Thomas' theory of the test of recovery was the most reliable, and was founded on the means of detecting early disease. The law might be roughly laid down that a joint was cured of disease when the range of movement did not diminish by use. Mr. Jones then dealt at length on the details of this method, and its practical applications. He further alluded to those cases which sometimes ran an erratic course, mainly in patients over sixteen. He urged that they were rare, and that the joints seemed too well to account for the symptoms on any but septicæmic grounds, and gave reasons for deprecating their excision. One great cause of the frequent resort to excision was founded on the want of a practical acquaintance with the principles of rest. The term differed in meaning almost every time used; its quality should be stated. Its quantitative estimation was also necessary to its definition. Another cause of failure was due to inattention to the mechanical details of splintage. In Liverpool and elsewhere very few really understood the proper application of the posterior hip splint, so that its full benefits were rarely attained. A splint was no more automatic than a violin. Another fallacy was the fear of ankylosis from long confinement. Mr. Jones removed a hip splint before the meeting, from a boy who had been confined four years in it, and who, up to that moment, had not had his splint removed. Motion in the hip was, in spite of this, quite good. "Passive motions" he also condemned it as utterly alien to the principles of rest. The extension of joints was even worse. The main clinical argument against the school was the frequency with which they advocated operation. Extension had been proved to induce disease in the strong and resisting tissues of healthy joints; how, therefore, could articulation saddened by disease be benefited. An inflamed capsule could not be improved by stretching. In the case of the hip in the early stages, extension could only induce pressure upon the lower and inner aspect of acetabulum, and adjoining surface of femur. Muscular control was easier and safer attained by extension. The speaker accounted for the relief of pain which at times attended excision; he considered the advice tendered by Mr. Wright, of Manchester, to excise as soon as abscess was detected, as extremely retrogressive. If followed, it would relegate to mutilation and deformity, a large number of curable cases. The little baby, for instance, exhibited that evening with perfect motion at the hip, would be destined, had his advice been followed, to limp for life. So would fifteen or sixteen of the other cases. The operator could claim no advantage over him who relied on rest in its full sense. The former did not cure but obliterated joints, whereas, the latter cured a number which became totally free from defect, others were partially defective, and his worse cases compared favourably with the operator's best. Howard Marsh and Mitchell Banks had pointed out the infrequency of operation among the well-to-do, and Mr. Jones argued that endeavour should be made to place on equal footing hospital patients. When cases were shown to advocates of excision which had recovered in spite of the worst disease, they argued still in favour of operation, because of time saved. They could not deny superiority of result to those who could afford to wait, but resorted to operation as an expedient of hurry. The same argument would relegate a one-legged artisan to a wooden stump, instead of an expensive artificial limb, and did not argue against treatment by rest, but against his good fortune. In the case of children there could be no excuse for this argument. Mr. Jones then argued at length to prove that the time saved was very trivial unless almost healthy joints were excised, although the treatment of those who practised rest was deficient in many elements which he, Mr. Jones, thought essential to the correct appreciation of the term. He added that the improved market value of a man properly cured would outweigh the defect of length of time. To this should also be added the direct mortality from operation and the frequent flail sequelæ. Some surgeons excised because of the pathological conditions they diagnosed. They seem unaware that recoveries could take place where rupture of capsule, abscess of joint, synovial thickenings and ulceration of cartilage, had taken place. The cases shown that evening with numerous sinuses and movable joints should reassure them. The fear of diathesis, more especially the tubercular, alarmed others. Either the term was much too fre-

quently applied, or the disease was curable. He referred to the discussion on tubercular peritonitis held at the Clinical Society on October 28th. He maintained that all surgeons of experience would be able to refer to old cases of strumous or tubercular disease where patients had recovered unassisted by art, and had appeared at hospital for the rectification of deformities. Some of the cured cases exhibited that evening betrayed typical strumous characters. He would not include under the term excision those cases of incision into hip for the removal of necrosed bone, or loose bone; such operations on surgical grounds were urgent. After summing up in favour of saving joints in preference to excising them, Mr. Jones urged that it was more important to reclaim those tissues encroached upon by disease than to advocate their sacrifice.

Mr. ROBERT JONES and Mr. THOMAS showed, amongst other cases, the following in illustration of the paper:

Case 1.—J. Q., æt. six; suppurative arthritis of knee, three years in splint. Two years ago abscess of knee opened on inner side. Rest uninterrupted; movement of joint increasing.

Case 2.—Suppurative arthritis of Knee. H. W., æt. sixteen. Duration of disease two years. Suppuration of joint. Aspirated seventeen times. Joint also opened. Shortening quarter of an inch. Good range of motion.

Case 3.—Suppurative arthritis—amyloid disease. C. B., æt. twelve. Duration of disease nine years. In splint for eight years without interruption. Aspiration thirty or forty times. Six sinuses into joint. Half-inch shortening. Very good motion in joint.

Case 4.—Suppurative arthritis of knee. Two sinuses into knee. Total duration of disease nine months. Deformed and ankylosed during disease. Good motion now.

Case 5.—Suppurative arthritis of ankle. Twelve months in splint. Two sinuses. Prolonged pyrexia. Free motion in joint.

Case 6.—Suppurative arthritis of hip joint with fifteen sinuses leading into hip-joint. Kidney diseased for two years. In splint for ten years. Patient twenty-five years old. Can now walk long distances. No deformity. Shortening three-quarters of an inch.

Case 7.—Suppurative disease of ankle. C. B., æt. eight. Two sinuses. In splint six years. Movable ankle.

Case 8.—Suppurative arthritis of elbow. Two sinuses. Patient under treatment for eighteen months, during which time albuminuria was present and liver enlarged. Recovery with free motion.

Case 9.—Suppurative arthritis of hip with lordosis and tilted pelvis. Eighteen months under treatment. Two incisions made. Correction of deformity. Shortening scarcely half an inch, although the apparent shortening when first seen was three inches. Free motion in joint.

Case 10.—Arthritis of hip. Splint taken off at meeting for first time after four years to show that long-continued rest did not result in ankylosis. Motion free.

Case 11.—Suppurative arthritis of hip. Three abscesses into joint. Lardaceous disease and dropsy for twelve months. Complete recovery, with three-quarters of an inch shortening.

Case 12.—Suppurative arthritis of knee. Knee splint five months. VERY SLIGHT movement, which is increasing.

Case 13.—Suppurative hip disease in a baby cured after eighteen months treatment, where only one aspiration proved necessary. Motion free.

Mr. JONES showed several other cases of a similar kind in proof of his assertion at a previous discussion, that under the proper application of prolonged rest joints recovered their functions in spite of extensive suppuration.

Dr. ALEXANDER said he deprecated routine treatment of any kind, and he certainly deprecated the routine treatment of joints. The advocates of rest, however, sometimes went too far, and cases were lost through their unwillingness to operate. He disagreed with the early "excisionists," and thought excision should only be performed when dead bone required to be removed. The great majority of diseased joints could, however, be cured by rest, especially rest commenced early and long continued. In spite of rest a number of cases drafted into hospital for operation, and often when admitted the disease would only admit of amputation. By earlier operation the limb might have been saved. He did not think aspiration was always necessary in hæmorrhosis.

Prof. RUSHTON PARKER would not attempt to criticize severally the many points taken up by Mr. Jones, but in general terms agreed with most of the views he expressed. There was no doubt that among surgeons who had carefully devoted themselves to the improvement of their mechanical treatment of joint affections, the necessity of excision had greatly declined in frequency. Not that excision could ever be totally abolished, but they had certainly come to be less relied on in Liverpool and London. By the force of example, too, the number of such operations had been further diminished, just as in a former time the same influence had led to their multiplication.

Mr. PUZEY congratulated Mr. Robert Jones on having been able to collect such a large number of patients to illustrate his views. The cases showed the result of great patience and perseverance on the part of the surgeon, and of great patience and faith on the part of the patients, many of whom bore abundant marks of the trials through which they had passed. There appeared one serious objection to this expectant treatment in the case of the working classes, and that is the length of time over which it extends—two or three of the cases had required seven years, one or two nine years, and one over ten years for cure. Surely in such cases excision would be preferable. As an example of his meaning, Mr. PuzeY mentioned the case of a boiler-maker who had been off work for three years under expectant treatment for elbow-joint disease; when he came to the Northern Hospital Mr. PuzeY excised the joint, and the man returned to his old work in six months time with a strong and perfectly-movable elbow. With young people and children, of course, time is not such an object, but even in their case serious risk is incurred from prolonged and exhausting suppuration, with its frequent result of visceral mischief. The cases shown that night were most interesting, and in themselves remarkable successes; but the most important point was what proportion did they bear to the non-successes; to the cases which had ended in excision, or amputation, or death? The experience of surgeons to general hospitals and parish infirmaries was that too prolonged reliance on the expectant treatment of joint disease ended too frequently in amputation or in death, either directly from the joint mischief, or indirectly from induced visceral disease.

Mr. BARK congratulated Mr. Robert Jones on his paper. He remembered the epidemic of excisions about the year 1874 or 1875 so feelingly referred to by Mr. Rushton Parker, and had a vivid recollection of the exhaustive suppuration, the long and tedious character of the healing process, the flail-like movement of the limb after healing took place, and the numerous secondary operations in the form of amputations. He had an experience of more than twelve years in the treatment by rest and proper drainage, so ably advocated by Mr. Jones, and had never been disappointed, or ever felt a desire to return to excision. Mr. PuzeY mentioned a very successful case of elbow-joint excision as an unanswerable argument in favour of his side of the question; but all surgeons knew that this joint was the most favourable for the operation. He would have liked Mr. PuzeY, or the other gentlemen who vaunted excision, to have produced a few cases of hip or knee-joints as favourable in duration and ending as his elbow case. He maintained that Mr. Robert Jones had proved, theoretically and practically, what he intended—viz., "That diseased joints may be treated by prolonged rest and drainage, even after extensive suppuration, without impairing the mobility of the joint."

Mr. GEORGE HAMILTON regretted not having reached in time to see Mr. Robert Jones's cases, but he thought that generally excisions gave better results than rest. He had witnessed some excisions which had been performed very early, where good movement resulted. He, Mr. Hamilton, knew of a case of hip disease in his neighbourhood, where, after treatment by complete rest, and that by one who was well acquainted with the method, the child now wore three inches under the sound foot. He thought that was worse than excision. He felt sure that if Mr. Jones knew the end of his cases he would find some of them gravitated to the Northern Hospital. He thought Mr. Robert Jones would one day begin to excise.

Mr. RHINALLT PUGHE believed in the usefulness of excision. He thought there was no merit in curing joints if the patients ultimately died of amyloid disease.

After a few remarks from Dr. BARR, who suggested a verbal alteration in the paper, Dr. ARCHER asked what became of patients who were the subjects of amyloid disease. Did they recover, or ultimately die of phthisis?

The PRESIDENT expressed himself much interested in the discussion, and asked Mr. Jones whether he noticed any diminution in the size of the amyloid livers during treatment. He related a case of Mr. Paul's where, after an operation for suppurative disease, the amyloid disease disappeared. It would be very interesting to learn whether Mr. Jones's amyloid cases fully recovered.

Mr. H. O. THOMAS, while agreeing with some of the opinions expressed by previous speakers, drew attention that in neither medicine nor surgery have we infallible forms of treatment; whether joints be treated by the utmost attainable rest, excised, or amputated, there must be a mortality. He further maintained that if our principles were reformed the mechanical treatment of joints would also improve; and that no improvement in the construction of instruments will avail until the theory of treatment is set right. The mortality attendant upon attempts to conserve diseased joints will not diminish so long as we continue so heedless in searching after correct principles. He contended

also that the best excision never equalled a conserved though ankylosed joint. Mr. Hamilton referred to a case of conserved hip-joint in which there was shortening of three inches. The case had been under treatment some years ago, when the patient was only four or five years of age, and had recovered with ankylosis. There was no trace of lardosis or angular deformity. As in excisions, the shortening is relative to the age of the patient, and to the time at which the operation is performed; for if the patient is a very young one the shortening when she arrives at the adult period is much greater than would remain after excision in adult life. The history of the case Mr. Hamilton alluded to is, that some years ago, the patient was treated for slight hip-joint inflammation, and during which treatment a practitioner of medicine casually visited the patient's home, and also examined the case, giving at the same time the emphatic opinion that the child was not, and had never suffered from hip-joint inflammation. This diagnosis induced the parents to suspend all treatment, with the result that the hip-joint suppurated, sinuses formed, and the kidneys became affected; still it ultimately recovered with a useful limb. It is true with the defect of ankylosis and shortening, yet much more to be preferred to the defect known as flail, and the greater shortening to be observed after some excisions. In his own practice, in principle his treatment of joint disease was characterised as the indirect method. All retention being applied to sound parts, just as in medicine, sometimes the beneficial action of the remedy follows from its effects upon parts healthy, affecting only indirectly the diseased area. Joints suffering from traumatism, the speaker admitted, were very tolerant of the direct method of retention. Referring to Mr. Bark's early experience of excision, he also had a vivid recollection of the fearful epidemic for excising, that lasted from about 1857 to 1877, and could exhibit, if required, flail hips and elbows, and hips still discharging pus. He met with one case of hip flail after a recent excision. It was an excellent case as regards sound recovery, but the lower extremity remained attached to the trunk by what might be fairly termed a pedicle, permitting of such liberty that the subject could tickle his ear with his big toe, and that only when the hand was used as a guide.

Mr. ROBERT JONES, in reply, said that many cases of amyloid disease recovered during treatment, and that five or six cases had been shown that evening. He added that vexatious and irritating treatment would be likely to induce the amyloid condition. Mr. PuzeY had chosen the cases that had taken the longest time in order to disparage the treatment by rest. Mr. Jones, however, had chosen samples of such cases in order to show the motion that ultimately accrued in cases which text-books would denounce as disorganised joints. He had, however, shown suppurative joints cured in nine months. Mr. PuzeY, however, had not referred to the movable joints obtained by rest and precluded by excision. He thought it was too much, after upwards of twenty cases had been shown, all of them recovered from the worst type of disease, to be asked what became of the others. It might be equally asked of Mr. PuzeY's excisions. Nor did he think Mr. Hamilton's reference to the Northern Hospital likely to assist in the discussion. It was far better not to compare the merits or demerits of individuals or institutions. Most of the cases shown that evening had had previous treatment elsewhere; but the patients had been specially told not to refer to it. After answering various speakers, he hoped that the cases shown that evening would be a plea on behalf of joints threatened with excision, and he thought that members would agree with him that long confinement and extensive suppuration of joints did not preclude recovery with good motion.

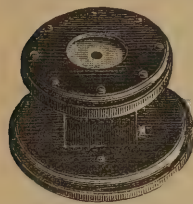
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OBSTETRICAL SOCIETY OF LONDON, February 1st, 1888. On the effect of Ergot on the Involution of the Uterus.—There is much diversity of opinion on the value of ergot in labour, some authors going so far as to absolutely condemn its use. Drs. HERMAN and C. O. FOWLER, in a paper read before the above Society, brought forward a series of observations novel to a certain extent, and opening out a new field of enquiry. Fifty-eight patients were treated with an ergot mixture for a fortnight after labour. Sixty-eight had a single dose after labour, and no more. The uterus diminished more rapidly in size in the first series than in the second. The ergot did not seem to have any effect on the lochial discharge.—Dr. BOYAL gave ergot mixture to every alternate patient, and he concluded that the ergot had not appreciable effect on the lochia; but it tended to prevent the formation of clots, to hasten their expulsion, and to diminish the after-pains.—Dr. DAKIN, in his observations, did not support the view taken by the authors. With reference to the retention of clots and the recurrence of after-pains, he found that out of 92 cases where ergot had been given three days, 51 had after-pains and 22 passed clots. Out of 105 cases where only one dose of ergot was given, 64 had after-pains and 41 passed clots. Dr. Dakin pointed out many sources of fallacy in observations of this kind.

Surgical Aids and Appliances.

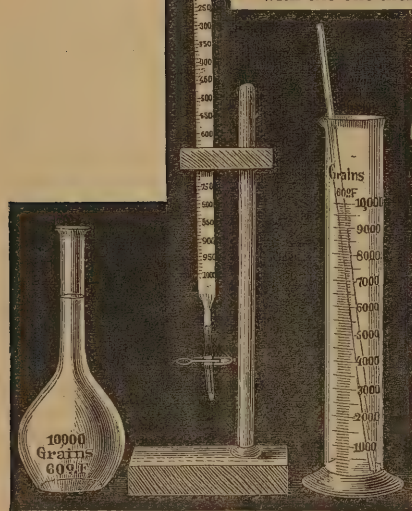
90.—THE "SIMPLEX" MECHANICAL TELEPHONE.

This instrument, being entirely mechanical, is of very simple construction. No batteries are required, and there is nothing in the instrument which can get out of order or require attention. It is not affected by electrical "induction" or "interruption," and where the distance is not too great, it is more efficient than electric telephones. A single instrument acts as transmitter and receiver at each end, the two being connected by a tense steel wire; and there being nothing to hold, the hands are free to write down, if necessary, any message. To call attention, tapping on the diaphragm of the telephone is often found sufficient. Magneto-electric call-bells are, however, sometimes used. No batteries are required for these, nor is a separate wire necessary. It will be found invaluable to practitioners having partners, assistants, surgeries, or stables at a distance, and for connecting distant parts of hospital, etc. The cost is very small, that of the instruments being 30/- a pair only. Estimates and other particulars may be had by applying to the inventor and patentee, Mr. T. Harding Churton, 35, Park-square, Leeds.



91.—APPARATUS FOR VOLUMETRIC ANALYSIS.

THE accompanying drawing explains Messrs. Poths and Co's. (Leadenhall-street, London,) apparatus for volumetric analysis. It is made in strict conformity with the one mentioned at page 488 of the



'British Pharmacopœia,' for British weights and measures, though it can be had estimated in grammes if desired. The makers have wisely added a long glass rod, which will be found highly serviceable. In these times when great efforts are made to bring the standard of scientific education of chemists and druggists to a higher level, and when the examinations are made more difficult, a great many assistants might avail themselves of this convenient way of possessing themselves of such a set of apparatus, as offered by them, and their offer will perhaps cause many chemists and druggists already established, but not having any as yet, to make up their minds to get one. We direct attention to two points: 1. The convenience of obtaining these apparatus ready packed from stock without having to specify the items separate. 2. The very moderate price which include packing and carriage to any part of the United Kingdom—viz., 10/- each.

Medical Miscellanea.

THE subject of our next illustration will be George J. Allman, M.D., LL.D., F.R.C.S.I., F.R.S.

The Pasteur Institute now in process of construction at Vaugirard will cost 1,500,000 francs.

Sir J. Crichton Browne has been elected President of the Neurological Society of London.

The personal estate of Sir George Burrows has been valued at £104,628.

The *Scientific Enquirer* is still published under the able editorship of Mr. Allen.

Dr. Wesley Carpenter, New York, one of the ablest literateurs in the United States, died suddenly on January 7th.

The Berlin police have warned the public as to the value of Warner's "Safe Cure," sold for four marks a bottle. The remedy is said to consist of American winter green.

We direct the attention of our readers to the admirable discussion which took place at the Liverpool Medical Institute on "Excision of the Knee."

The late Dr. Hamilton, Cookstown, Ireland, was an old Poor-law officer; he was for forty-six years Poor-law officer of Cookstown Workhouse.

A National Pension Fund for Nurses is now being incorporated. £20,000 has been deposited with the Court of Chancery for a working fund. This sum was given by Lord Rothschild, Mr. H. H. Gibbs, Mr. P. Hanibro, and Mr. J. S. Morgan.

Mr. George St. George, surgeon to the Co. Antrim Infirmary, has presented a most satisfactory report to the governors, and he is to be congratulated on the successful surgical result of his cases, major and minor.

Our confrere, Dr. Alfred J. H. Crespi, of Wimbourne, is engaged in other literary work in addition to that which he is doing for our columns. A lengthy article from his pen on "The Relation of the Physician to Dying Patients" will shortly appear in the *Nineteenth Century*, as well as other papers in the *Cornhill* and *Tinsley's*; the last has been revised with some energy, and is well printed and readable.

The *New York Medical Record* says: "A dispute has lately arisen in Paris between M. Zola and M. Sarcy over the question whether asses can vomit. Asses cannot under ordinary circumstances vomit. But they are not given a fair chance. Let the poor animals have read to them some of M. Zola's wash-tub realism, or say one of his chapters on obstetrics, small-pox or delirium tremens. Then observe the emesis.

We are pleased to record a graceful act on the part of the Manchester, Sheffield, and Lincolnshire Railway Company. After the Hexthorpe accident a large number of patients were taken to the Doncaster Infirmary. The Company have voted £50 to Mr. Penny, the house surgeon, in recognition of the additional labours imposed upon him, and with the best thanks of the Board, besides giving a donation of £250 to the Infirmary.

Some members of our profession have lately died at an advanced age—viz., Mr. Monk, surgeon, Preston, aged ninety; Dr. Sealey, Bridge End, seventy-six; Dr. Bailey, West Chester, Pens., eighty-seven; Dr. Walker, Peterborough, ninety-one; Mr. Silvester, ninety-nine; Dr. Ogsten, Aberdeen, eighty-four; Dr. Neklewitsch, Poland, 109; Dr. Prudy, New York, seventy-six; Dr. Hatfield, Philadelphia, eighty-three.

Pasteur's method has been simplified.—We learn from the *Medical News* that Dr. Högyes, of Buda-Pesth, has published in the *Orvosi Hetilap* an account of some researches he has made on the protection of dogs from rabies by a somewhat simpler method than that employed by Pasteur. He, too, makes use of the spinal cord of an infected rabbit, but instead of drying it to a gradually increasing extent to obtain various degrees of activity, he merely rubs it up with water containing chloride of sodium so as to make solutions varying in strength from 1-10th to 1-500th. The dog to be protected is injected successively with these, beginning with the weakest. The results appeared to be quite satisfactory, and a complete immunity from rabies to be secured by six of these injections.

TO ADVERTISERS.

THE attention of the proprietors of this journal has been drawn to a surcharge by the postal authorities upon the printed circulars sent out by the advertising department. The proprietors would feel greatly obliged if any persons who have been charged excess postage would kindly communicate with Mr. Bella, at the London office, 58, Charing Cross-road, who will immediately refund all expenses. As will have been seen by the recipients of such circulars, there is nothing which infringes the regulations of the postal authorities, and the prejudice caused by the ignorant action of local postmasters through excess of zeal is much to be deplored. The attention of the authorities has been duly drawn to the matter, and after the customary delay of three or four months, they will probably issue the stereotyped apology in use under similar circumstances.

Correspondence, Notes, and Queries.

Communications, Books, etc., should be addressed directly to the EDITOR, "The Provincial Medical Journal," Horton House, Halifax.

Matters of business should be addressed to the Publisher, at the Offices, 10, Friar Lane, Leicester; or to the London Representative, Mr. E. BELLA, 58, Charing Cross Road, W.C., to whom all communications respecting Advertisements should be addressed.

We cannot undertake to return rejected MSS. unless stamps sufficient for their postage are enclosed.

We shall be glad to receive reports of Medical Vacancies, Appointments, Meetings of Societies, etc.

Papers containing passages for consideration should be marked.

Correspondents must please attest their communications with their proper name and address (not necessarily for publication).

Contributions must be written on one side only of the paper.

MSS. intended for publication to be sent in not later than the 16th of the month.

The insertion of any letter in these columns cannot be taken as necessarily indicating our adhesion to the views or statements therein expressed. The same remark applies to articles to which a name or nom-de-plume is attached.

THE PRACTICAL VALUE OF THE M.D. DEGREE.

To the Editor of "The Provincial Medical Journal."

SIR,—The question of the granting of degrees in medicine and surgery, which has been so long, like a slumbering volcano, making its presence known by murmurings and occasional tiny explosions, has suddenly taken an acute form, and a crisis (which may be taken to correspond with the eruption) seems imminent. The initials "M.D." after a man's name seem to very many, so far as can be judged from the controversy which has long been carried on, to be the *summum bonum* of medical professional requirements, and to be possessed of the right to append them, as imparting a magical influence and power. The appendix "M.D." seems to some to bear to all other medical and surgical qualifications the same relative importance as the sun bears to the remainder of the planetary system: it dazzles, and seems to them to imply that all the others should pale before it. It seems the very acme of professional bliss, and its possession the remedy for all "those ills we have" as a body. Whether the views of those who are thus clamouring and striving will be found to tally with those of men who have already entered the cabalistic "M.D." portal is more than questionable. The wailing cry of "*Medical Degrees for London Students*" has, as was inevitable, been taken up by all the numerous licensing bodies in the United Kingdom; while on the other hand, the universities have been, from their peculiar composition, the only corporations hitherto entitled to grant a doctor's degree of any kind, are roused to opposition, in order to preserve what they term their liberties, but as we prefer to call them, their privileges. The move made jointly by the Royal Colleges of Physicians and of Surgeons, of London, is now followed by a similar action on the part of the Scottish licensing bodies—viz., the Royal Colleges of Physicians and of Surgeons, of Edinburgh, and the Faculty of Physicians and Surgeons of Glasgow. Other independent bodies, from all parts of the kingdom, unconnected with either of the foregoing, are now certain to enter the arena and join issue. This will undoubtedly be followed by a combination of the remaining universities, when the battle will become general all along the line. Whether the issue at stake is worthy of the importance thus attached to it is, from the numerous points of view from which it may

be regarded, a mere matter of opinion. But from one of these aspects, there is only one answer possible, which will be best contained in the reply to this question: What is the *practical* value of the M.D. degree to members of the medical profession? By holding it, do they become in any way more learned? Do they become in any way better practitioners? Are they rendered more competent to deal with disease and the public health? Is their general position in any way improved by it? Are they in any way rendered superior men to those who may either not choose to obtain the degree, or through any other circumstances be prevented from proceeding to obtain it? Are professional fees either raised or affected? Are there any special privileges acquired?

Let us suppose that every duly-qualified medical practitioner in the British dominions held the degree of M.D.—what would be the condition of affairs? Each man's relative position would remain unaltered. Professional ability is not a matter of degree, or of this or that qualification, but one of purely personal character. Medical practitioners would not in any way rise in the estimation of the public. What would be considered is practical ability, the power to perform the physician's or the surgeon's work well and genuinely. Look at the state of things to-day in any of our towns where medical men are numerous—the best practices and widest *clienteles* are found most frequently in the cases of men who hold what some are pleased to call minor qualifications, while others who hold what are similarly termed high qualifications may have little or nothing in the way of practice. It is already found that neither Doctorates or Fellowships avail anything if certain personal qualifications are absent. The latter are not to be acquired by passing any number of examinations, or obtaining any series of diplomas, any more than it is possible to convert any ordinary individual into a gentleman by giving him a complete university curriculum. Assuming, then, that every registered practitioner were an M.D., the struggle for superiority would continue, and anything like equality (which appears to be the great desire underlying all this fermentation) would be as far off realisation as ever: the conditions of every-day life would remain unchanged; competition would be just as keen; and personal, natural differences would tell in the end just as powerfully.

"Necessity will make us all forsworn

Three thousand times within this three years space;

For every man with his affects is born,

Not by might master'd, but by special grace."

(*Love's Labour Lost*, Act I., Scene I.)

The whole thing would likely degenerate into an extension of the present fashion of squabbling about the superiority of the various schools. The M.D. London would declare his degree better than the M.D. Cantab.; the Oxford graduate would insist on being considered better than either; while the M.D. of Manchester or Birmingham would claim to be better qualified than all put together. While this is going on, it may probably be found that some pushing individual, located in some obscure street, with a five-dollar bogus diploma, is doing a larger practice, and earning perhaps twice the income of any two of such highly-qualified gentlemen.

The actual value of any qualification will never be positively ascertainable until all are made to pass through the same ordeal—through a State examination uniformly imposed; then, and then only, will a man's academical powers be allowed to show themselves, and the amount of actual medical or surgical knowledge he has shown the ability to acquire be evinced. That this should ever be the case is, so far as we can at present judge, most improbable. With regard to the point we have raised, the actual practical worth of any medical degree to the practitioner is but small, and it seems sad to see licensing corporations of such ancient standing and honourable records striving to subvert their own time-honoured and revered membership and licenses in order to adopt a bare formal proceeding, in order to bestow upon their licentiates what, if they succeed in extinguishing their own distinguishing titles, will go far to efface themselves as corporations from the number of licensing bodies, for the sake of bestowing what to the recipients will prove little better than a mythical title.—Yours truly,

A BONA FIDE M.D.

ALCOHOLISM AND STRYCHNIA.

To the Editor of "The Provincial Medical Journal."

SIR,—As to the value of the treatment of chronic alcoholism by strychnia, there can, I think, be no doubt; but to affirm as some authorities do, that the one is antidotal to the other, is to put a wrong construction upon the effects observed. In all chronic cases of this very common complaint the blood is reduced in fibrin and hæmoglobin, as is shown by the cadaverous and bloated appearance of every drunkard; and this is to be explained by the deleterious and well-known action of alcohol upon the liver. In addition to this, the effect of the drug is to stimulate and dilate the peripheral capillary circulation. By continual

stimulation of the circulation, and consequent continual dilatation of the peripheral capillaries, debility of their walls, and delayed peripheral circulation are induced, with consequent drain of fluids from the central capillary system. Hence the continual thirst of a confirmed drunkard. The more he drinks the more intense becomes his desire to drink yet again; not so much, or altogether, because he likes the taste, as because his throat is dry and parched. Herein lies the value of strychnia. By its powerful tonic action on the peripheral and central capillary walls, it lessens the "circulatory cavern" the drunkard in vain tries to fill, and thus brings about a healthy because a moderate desire for liquids.—I am, Sir, your obedient servant,

Clayton-le-Moors,
February 6th, 1888.

C. K. ILLINGWORTH, M.D., M.R.C.S.

TARDY CONVALESCENCE IN THE PUERPERAL STATE.

To the Editor of "The Provincial Medical Journal."

SIR,—Like your correspondant "J.M.G.," I have had several cases of the above, and should be glad of any suggestions for their better management. One case now under my care is that of a healthy patient who was delivered of her third child on November 24th, 1887. The labour was perfectly natural in every way, and for the first week the condition of the patient was satisfactory. She then began to perspire rather freely and to complain of feeling weak and exhausted, although she was able to partake plentifully of nourishment. The lochia continued for a fortnight after delivery, when she got up and began to move about. The perspiration gradually ceased, and during the third week there was a slight muco-purulent discharge, which was soon controlled by the use of injections. She never complained of much pain; the temperature was never above 100° F. I could discover nothing physically wrong either by external examination or *per vaginam*; and although it is more than two months since she was delivered, she is only now beginning to "feel herself," and is still far from being well. Although this has been the most tedious case I have had still, it is not the only one of the kind, and I should be very glad to know what treatment one can adopt in such cases, beyond rest, good nourishment, quinine, iron and general tonics.—Yours truly,

Bolton, February 6th, 1888.

J. JOHNSTON, M.D., EDIN.

WHEN SHOULD THE UMBILICAL CORD BE TIED?

To the Editor of "The Provincial Medical Journal."

SIR,—Undoubtedly an erroneous theory concerning the tying of the umbilical cord at birth is gaining some attention. It is claimed that late tying is desirable. Nothing could be more undesirable. The best method is to tie as soon after the birth of the infant as possible, not waiting for the expulsion of the placenta or after-birth. As soon, indeed, as the infant breaths the cord should be tied. The fact that the infant is more sleepy, and does not begin to drink so soon when the cord is tied late, is in itself proof positive that the blood left in the placenta after expulsion is *not desirable* for the nutrition of the infant. If, as Dr. Eagle recommended, the cord be tied late, good arterial blood is lost thereby for poor venous blood. The supply of arterial blood lost by late tying is only in part returned by venous blood. The importance of early tying is to start the little infant with the best supply of blood possible, so that the purest of blood-making may go on normally in the future. This is a very important fact to consider. Late tying, therefore, has other objections than the immediate injury of the infant: its ill effects are far reaching. Undoubtedly, considerable future mental and physical suffering can be induced by late tying. Infant life is so quickly and seriously influenced by what might seem to the careless observer merest trifles. The cord should be tied at least two and a half or three inches from the body, with a firm cotton cord in a surgeon's knot, and another ligature should be taken an inch from this to prevent the bleeding of the after-birth veins. The cord should be cut with scissors between the two ligatures.

No patent clamps, tape, or rubber bands should be used. Nothing can be better than the clean cotton cord, uncoloured. The cord may be "medicated" by soaking it in "boracic" before it is used. Carelessness in tying or dressing the cord has often resulted in serious danger to life, and sometimes has been of lasting injury.

The cord should be dressed with T. Metcalf's "boracic ointment," which is especially valuable for use in such cases, and will be found very superior to all other preparations, in that it does not become sour, but really possesses strong disinfectant and restorative powers. It is clean and wholesome, and never disappoints. This ointment should be spread on fine linen, and applied with great gentleness.—I am, Sir, yours truly,

Newport, R.I.,
February 19th.

W. THORNTON PARKER, M.D.

Bibliographical Record.

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- Some Comments on Leprosy in its Contagio-Syphilitic and Vaccinal Aspects. By A. M. Brown, M.D. London: Hirschfeld Brothers, Fetter-lane, E.C.
- Annual Report of the Governors of the County Antrim Infirmary for the year ending November 30th, 1887, with Medical and Surgical Report.
- The *Liverpool Medico-Chirurgical Journal*, including the proceedings of the Liverpool Medical Institution, No. 14. January, 1888. London: H. K. Lewis.
- Gout in its Relations to Diseases of the Liver and Kidneys. By Robson Roose, M.D., Fifth edition. London: H. K. Lewis.
- Report of the Bourton-on-the-Water Cottage Hospital, 1887.
- Health of Children. By Angel Money, M.D. London: H. K. Lewis.
- Report of the Thompson Memorial Institution for Incurables.
- Biliousness: its Causes and its Rational Treatment. By A. E. Bridger, B.A., M.D. London: Renshaw, 356, Strand.

PERIODICALS RECEIVED.

AMERICAN:—

1. The Journal of the American Medical Association.
2. The Therapeutic Gazette.
3. Medical Register (Philadelphia).
4. New York Medical Journal.
5. Medical Record (New York).
6. The Medical Bulletin (Philadelphia).
7. New England Medical Monthly.
8. Medical Times (Philadelphia).
9. The Polyclinic (Philadelphia).
10. The Analectic.
11. The Medical Standard (Chicago).
12. The St. Louis Medical and Surgical Journal.
13. The Denver Medical Journal.
14. Annals of Gynecology (Boston).
15. The Medical News.
16. The American Lancet.
17. The Medical and Surgical Reporter.
18. The American Druggist.
19. The Western Medical and Surgical Reporter.
20. The South Western Medical Gazette (Louisville).

BRITISH:—

21. The Philanthropist.
22. The Practitioner.
23. The Medical Chronicle.
24. The Medical Press and Circular.
25. The Journal of Microscopy and Natural Science.
26. The Indian Medical Gazette.
27. The Australasian Medical Gazette.
28. The Hospital Gazette.
29. The Journal of Rhinology.
30. The Birmingham Medical Review.
31. The Ophthalmic Review.
32. The Pharmaceutical Journal.
33. Public Opinion.
34. Health.
35. The Chemist and Druggist.
36. The British and Colonial Druggist.
37. The Australasian Journal of Pharmacy.
38. The Journalist.
39. Diet and Hygiene.

FRENCH:—

40. Journal de Medecine de Paris.
41. L'Union Medicale.
42. Le Progrès Medical.
43. Bulletin Général de Thérapeutique.
44. Gazette de Gynecologie.
45. Gazette Hebdomadaire des Sciences Medicales.
46. Journal de L'Ouest.
47. Journal du Nord.
48. L'Electrotherapie Journal d'electricité.
49. Revue Pratique d'Obstetrique et d'Hygiene de l'Enfance.
50. Annales de Gynecologie et d'Obstetrique.

GERMAN:—

51. Centralblatt für Kinderheilkunde.
52. Centralblatt für Gynecologie.
53. Centralblatt für Chirurgie.
54. Illustrierte Monatschrift der Artzlichen Polytechnik.
55. Der Fortschritt.
56. Fortschritt der Medecin.

ITALIAN:—

57. Lo Sperimentale.
58. Rivista Italiana.
59. Rivista Internazionali di Medicina.

PORTUGUESE:—

60. A Medicina Contemporanea.

RUSSIAN:—

61. Vrach.

SPANISH:—

62. Rivista Clinica de Barcelona.

The above journals have been regularly received. We shall feel obliged if editors of British and foreign journals will notify whether their journals have been sent.

Copies of Index for 1887 may be obtained at office, 10, Friar Lane, Leicester.

THE Provincial Medical Journal:

A MONTHLY REVIEW OF MEDICAL SCIENCE, LITERATURE, AND BIOGRAPHY.

VOL. VII.]

APRIL 2, 1888.

[No. 76.]

Our Portrait Gallery.

GEORGE JAMES ALLMAN, M.D., LL.D., F.R.C.S.I.,
F.R.S., F.R.S.E., CORR. M.Z.S.L.

THE subject of our illustration, according to *Men of the Time*, was born in Cork in 1812. He was educated at the Belfast Academic Institution. For a short time his mind was directed to politics, and he decided on studying for the Irish bar. His love of biological science, however, proved too strong, and before he had completed the required number of terms he gave up the study of law for that of medicine.

He graduated in Arts and Medicine in the University of Dublin in 1844. In the same year he was appointed to the Regius Professorship of Botany in that university, when he relinquished all further thought of medical practice. In 1854 he was elected a Fellow of the Royal Society, and in 1855 he resigned his professorship in the University of Dublin on his appointment to the Regius Professorship of Natural History in the University of Edinburgh, which he held till 1870, when the state of his health compelled him to resign it. Shortly after this the hon. degree of LL.D. was conferred upon him by the University of Edinburgh. His chief scientific labours have been among the lower members of the animal kingdom, to the investigation of whose structure and development he has specially devoted himself. For his researches in this department of biology the Royal Society of Edinburgh awarded to him in 1872 the Brisbane prize. In the following year a royal medal was awarded to him by the Royal Society of London, and, in 1878, he received the Cunningham Gold Medal from the Royal Irish Academy. He was one of the Commissioners appointed by the Government in 1876 to inquire into the state of the Queen's Colleges in Ireland. Soon after his election to the Edinburgh chair he was nominated one of the Commissioners of Scottish Fisheries—an honorary

post—which he continued to hold until the abolition of the Board in 1881. On the occasion of the General Election in 1874, the Committee for securing the return of a Liberal member for the borough of Bandon selected him for nomination, at the same time offering to relieve him from the necessity of pledging himself on any of the special questions which then formed a prominent element in Irish politics, but he declined the proffered honour. The same year, on the resignation of Mr. Bentham, he was elected to the presidency of the Linnean Society, which he held until 1883, when he resigned in favour of Sir John Lubbock.

In 1878 he was elected President of the British Association for the Advancement of Science, at the meeting held in Sheffield in 1879. On the completion of the exploring voyage of the *Challenger*, the large collection of Hydroida made during the great expedition was assigned to him for determination and description—a service which he had already performed for the Hydroida collected during the exploration of the Gulf Stream, under the direction of the United States Government. Results of his original investigations are contained in memoirs published in the *Philosophical Transactions*, *Transactions* of the Royal Society of Edinburgh, the *Transactions* of the Royal Irish Academy, and the *Transactions* of the Linnean and Zoological Societies of London, as well as in Reports presented to the British Association for the Advancement of Science; to the Mus. Comp. Zool., Harvard University, and to the Commission of the *Challenger* Exploration; also in communications to the *Annals of Natural History*, the *Quarterly Journal of Microscopic Science*, and other scientific journals. His more elaborate works are "A Monograph of the Fresh-water Polyzoa," fol., 1856; and "A Monograph of the Gymnoblasic Hydroids," fol., 1871-72, both published by the Ray Society, and largely illustrated with coloured plates. He is a Member of the Royal Dublin Society, and honorary member of various British and foreign societies.

Original Communications.

A NEW LITHOTOMY OPERATION.

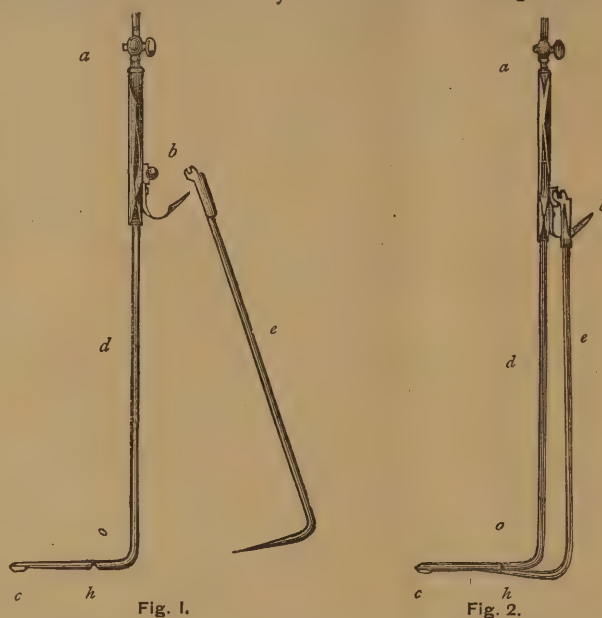
BY HUGH OWEN THOMAS (LIVERPOOL).

MANY modifications of the old lateral operation of lithotomy have been introduced into surgery during the last century, mostly devised to minimize its dangers, yet in some degree to lessen the amount of manual dexterity—required for the successful performance of the operation. I have operated up to this date upon thirty cases; not an extensive experience, true, but this number affords a fair opportunity of becoming familiar with the operation. The first case in which I operated, the ordinary curved staff with lateral groove was used; the incision and penetration were performed with an ordinary scalpel; the case was a success; and on cogitation it appeared to me to be an unsatisfactory manner of incising the bladder for the removal of stone, too much being left to the surgeon's skill. On reviewing the various methods, Civiale's medio-bilateral operation presented an important advantage, as it afforded a larger incision on entering the bladder, and consequently caused less injury in withdrawing the stone. This operation I performed twice, using his curved median staff and double-bladed bistoury. These two cases were also successful, but there was secondary hæmorrhage in both instances; this mode of operation appears to be safer and simpler on paper than in practice. My next change occurred when Mr. Hutchinson published his medio-bilateral operation with rectangular staff and median groove, flat bilateral cutting gorget, with probe point. One operation I performed by Hutchinson's method; this was a success; but as a whole the mode of operation did not satisfy me; nevertheless, Mr. Hutchinson's hollow staff, with median groove, excited my admiration, and I decided, that if I operated again, to employ this excellent instrument in combination with Civiale's double-bladed bistoury. This decision I was able to test, and was so pleased that I thought I had now a plan of operation which would come up to my ideal. Before long I discovered in Braithwaite's "Retrospect" a description of Dr. Corbett's double rectangular staff with lateral grooves. This, I at once saw, could be adapted to the median operation, and I planned a method and means of operation which may be said to be copied from—The old operation, a scalpel; from Dr. Buchanan's rectangular staff (how I was ever so obtuse as to use a curved staff I cannot explain); Hutchinson's median groove; Civiale's bilateral incision; Corbett's double staff; these I combined, with a small contribution by "Thomas," so that I believe the method I am about to describe can be performed with but little risk to the patient, requiring less manual dexterity on the part of the surgeon than any other method. From the moment of incising the skin of the perineum to opening the bladder, there is no interruption or change of instruments, the only merit of the old lateral operation.

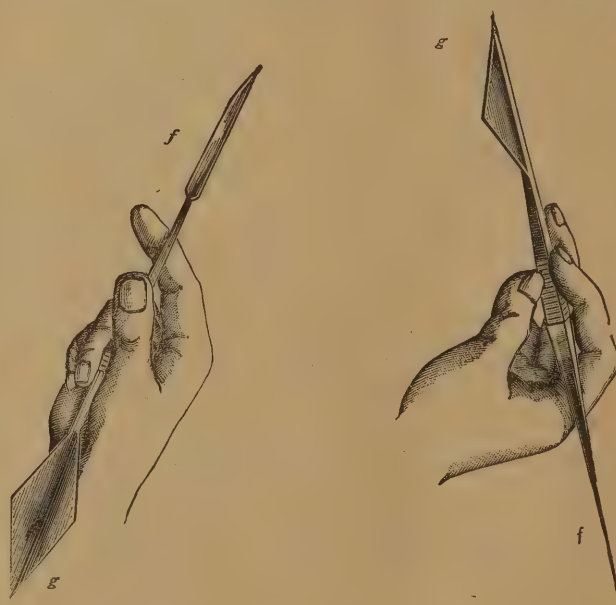
In my earlier experience of the medio-bilateral operation, I noticed that—though my cases always did well, losing only two out of thirty, one a child nine months, and an adult of sixty-four—secondary hæmorrhage occurred out of proportion to the number of cases operated upon; but, as—in my opinion—I perfected the means for, and the manner of operating, I no longer noticed any cases of

secondary hæmorrhage; indeed, the majority of those treated in later years were almost bloodless.

Fig. 1 is an illustration of the urethral and extra urethral staffs disconnected from each other by means of a hinge *b*. The urethral staff is hollow up to the right angle, from whence the median groove commences and terminates at the wooden cylinder sunk into the groove at

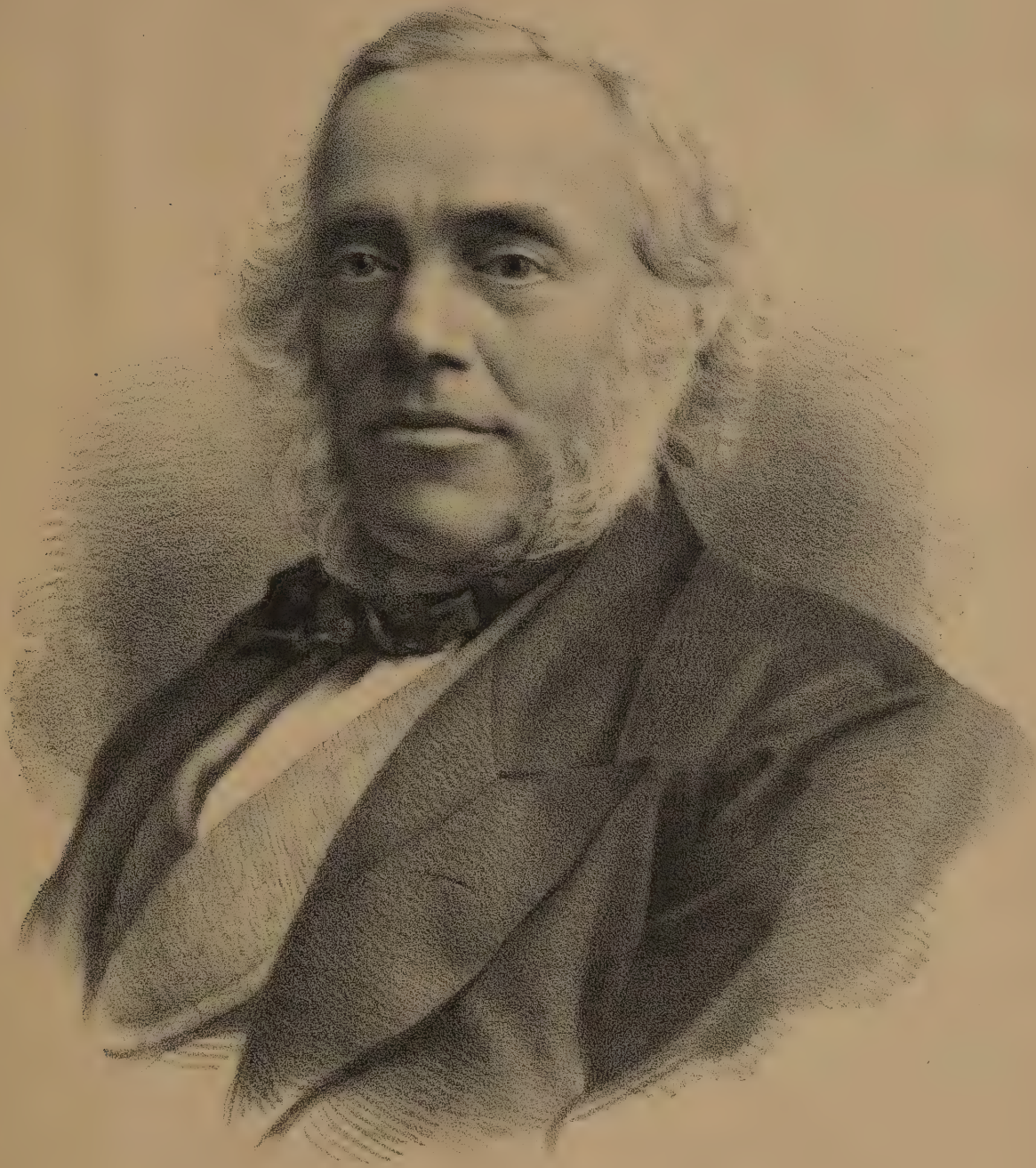


c. At *a* is a stop cock for retention of fluid injected into the bladder before operating. Situated at about an inch from the angle is a notch partly secting the median groove—fig. 1 *h*. The joint at *b* unlocks when the extra-urethral



staff is at right angles to the urethral one, but cannot escape; as soon as it descends parallel with the other, it is then locked by an ordinary spring catch.

Fig. 2 shows the instrument as in operation. The



Very truly yours
Geo. S. Allen

second staff is also grooved and pointed, so as, when in use, to enter and sink into the groove of the first staff at the notch (*h*) only. It is very necessary that the instrument maker when constructing the second staff, should make its angle, so that when it is in position, it is a little lower than that of the first one; otherwise, the second staff in describing an arc to enter the perineum will enter high and lock low, which may lead the surgeon to make his incisions rather high, whereas by attention to making the second staff a little longer than the first, it enters the perineum low, and gradually rises to the notch, thus almost certainly protecting the bulb and its artery.

Fig. 3 shows the instrument grasped by the hand, as in the manner of operating when about to incise the perineum; this instrument is a combination of a scalpel blade at one end *f*, and a cutting triangular gorget *g* at the other end.

Fig. 4 shows the same instrument reversed, and held as when in the act of sliding along the double grooves of the staffs to incise the membranous portion of the urethra and prostate. The operation comes under the class of "medio-bilateral with rectangular staff," and is performed by me in this manner. The patient being placed in the usual lithotomy position, the urethral staff is passed and the viscus is distended with two or three ounces of water, and retained by shutting the stop-cock; and the handle of the single staff is handed to an assistant, who is directed to hold it at right angles to the trunk. The next step is that the index-finger of the left hand is passed into the rectum, and on its finding the membranous portion of the urethra, the surgeon so locates the urethral staff in charge of the assistant that he (the operator) can feel the notch, fig. 1, *h*, in the membranous portion of the urethra, close to the prostate, still retaining the finger in the rectum. With the scalpel end of the combination instrument, as seen in fig. 3, a perpendicular incision is made in the median line of the perineum, commencing about two inches above the anus, and terminating about half an inch from its edge. This incision is crossed by another at right angles to it at its lowest end, about one and a half inches in length, so that the incisions present the lines of an inverted T—thus, \perp ; then guided by the finger in the rectum with a few strokes of the scalpel, the skin and other superficial structures are divided, advancing by careful dissection as close as practicable to the rectum, without wounding it in the direction of the membranous urethra, until progress is made to a point supposed to lie underneath the bulb when the second staff (which was in position ready for action) is brought down, and its sharp point made to enter the wound and come to a stop on piercing the urethra at the notch *h*, fig. 2, when, perhaps, a little fluid may escape. The surgeon instantly reverses his cutting instrument as shown in fig. 4, places the ridge of the triangular gorget *g* in the median groove of the second staff, pushing it forward until its further progress is arrested by its point coming in contact with the wooden cylinder *c*, on the extreme end of the urethral staff; the liquid contents of the bladder run out, and the surgeon withdraws his finger from the rectum and inserts it through the bilateral incision made in the prostate, and over the finger the gorget is now withdrawn, then the stone felt for, the staffs are removed and the stone extracted.

The operation is really easier to perform than this description would lead the surgeon to suppose, provided the two staffs are properly constructed in relation to each other. They should be both rectangular, or, if any

deviation is made, the angle should be slightly less than a right angle; and the angle of the second staff should be slightly lower than that of the first when locked home. This causes the gorget to enter low in the perineum, and rise to its work rather than advance horizontally to incise the membranous urethra and prostate. I am aware that other surgeons have introduced to our notice double lithotomy staffs, for instance, at page 451, in the third edition of Mr. Harrison's "Lectures on Surgical Disorders of the Urinary Organs," we have an illustration of a double lithotomy staff, and blunt-pointed, but cutting-edged gorget, a modification of a similar form introduced to the notice of the profession thirty years ago. The original one, its predecessor, having a cutting instrument attached to the second staff by a hinge, whereas, the latter, devised by Dr. Smith, of Baltimore, uses the gorget disconnected from the staffs. On carefully examining the illustration of Dr. Smith's instrument I noticed that the angle of the urethral staff was curved, and much more obtuse than a right angle. This is, in my opinion, provided that the staff were held in the usual manner, or the manner in which I have instructed, a very dangerous instrument to employ, but I find from the position of the hand in the illustration that it is intended to be held by the operator's left hand, while with the right hand he uses the gorget. This manner of performing the operation enables the operator to practically reduce the obtuse angle of his instrument to a right angle, or even less. This leaves one item, at least, to the operator's judgment, which Corbett's instrument, or its modification by myself, does not.

Small contributions are sometimes thankfully received, and here are submitted to the reader what little I have to contribute concerning the after treatment of lithotomy. It appears to me that to this part of the operation surgeons of large experience have given us but little information. In early years, during my search for information by which to interpret unwelcome symptoms, I obtained very little assistance, and it is remarkable that surgeons who have performed their scores of lithotomies have not published a series of typical cases illustrative of the after treatment and its complications. One case would do, for instance, in which the patient operated upon recovered in a few days. Of such cases we have plenty of reports already; but more of those cases would be welcomed in which the patient, whether he recovered or not, had grave symptoms. These are the cases for which a beginner searches in vain when about to try his skill as a lithotomist. The first thing to which the surgeon gives his attention, after extracting the stone, and washing out the bladder, is the question of placing a drainage-tube in the wound. It is my invariable practice to put as large a drainage-tube in the wound as it will admit. For a long time I employed glass tubes. Of late years I prefer rubber ones; and no tube which I have ever seen devised appears to me to answer so well as a strong rubber one, having the same diameter of opening at both ends. The tube is retained in position by a thread passed through its diameter, and attached to thread loops, which have already been prepared by suturing the skin over the ischium. The patient now has a large bib placed under him, into which has been laid a good supply of medicated sawdust, to which has been added a small percentage of precipitated chalk; this is changed two or three times a day. Now an opiate is given to the patient, and as the bowels have been cleaned by a purgative and an enema before the operations, they need not be disturbed until spontaneous action occurs,

which can be safely allowed, even if we have to wait for one or two weeks, provided the patient's diet is properly selected to meet the requirements of our intentions. It has been my practice to leave the perineal tube to drain the bladder until all the constitutional signs of operative procedure, and traces of any lesion caused by the pressure of the stone in the viscus, had passed away. No matter how well the patient may progress, I always retain it three days at least, and when the tube is finally withdrawn, the bladder is drained—per urethram—with that convenient device, the elastic rubber catheter, changing and cleaning the catheter night and morning; occasionally also washing out the viscus through the catheter with a weak solution of chloride of zinc.

Some patients at first rather object to urethral drainage, but I found when discontinued they invariably request its re-adoption, as it materially diminishes the urinary irritation felt at the perineal wound. As to the mishaps of lithotomy, my two fatal cases bring to my recollection a comment by Sir W. Ferguson made in his "Lectures on the Progress of Modern Surgery," to this effect: "he had witnessed the most skilful operations terminate fatally, and very unskilfully performed ones progress exceedingly well." To my mind the last case which was fatal in my practice was the best performed of any, not half an ounce of blood was lost; the only hitch that occurred arose from my supposing the stone to be rather smaller than it turned out to be, so that my prostatic incision was too limited, and had to be enlarged to rectify my error; this kept the patient an extra five minutes under ether, so causing him to have been under the influence of the ether from the commencement of its administration until completion of operation, fully half an hour. To the prolonged action of the anæsthetic upon a well worn man of sixty-two years of age with highly atheromatous arteries, I chiefly attribute the fatal termination. During the first three days, with the exception of a dry, brown tongue, there were no grave symptoms of constitutional disturbance. On the third day he was seized with vomiting which lasted a few hours, and was followed by hypostatic congestion of both lungs, and he succumbed apparently to this lesion on the fifth day. The other fatal case was a child twelve months old. Here again there was a delay in the extraction of the stone; it could be easily felt on the introduction of the finger, but its detection by the forceps was not so easy as it lay up high behind the pubes. Its extraction delayed the operation five minutes. Again as the cause of fatality in both cases, it is very significant that the infant was subjected to no preliminary preparation, and the adult to only three days, and as I have committed this omission on five occasions, every one of which operations were followed by grave symptoms, I cannot help but think that a week or two, perhaps more, of preparation, which is my usual practice, to be a valuable item towards success. Last year a patient of seventy-two years of age was operated upon, a most uninviting subject. Six weeks were devoted to his preparation, and he did exceptionally well. Twice have I successfully at the advanced age of 72 years, and from one removed seven calculi each of three quarters of an inch diameter. He was an asthmatic subject, and had angular deformity of left hip-joint. He returned to me twelve months afterwards for examination and on sounding the viscus, there was evidence of his having made up for his loss, there had formed another nest of calculi. On this occasion he declined to be recut, not an unwise decision as he appeared, independently of his

years, a well worn man, though not a confirmed invalid. Once I recut a boy of three and a half years, and extracted a stone, though six months previously another had been removed while he was an inmate of a public hospital. On another occasion after incising the viscus there was extracted the wooden holder of a writing pen.

I have been much impressed during my experience of lithotomy by the better progress of cases which had been prepared, as compared with those which had only a short period of introduction to the operation. To the most unwelcome of the two cases of seventy-two years, I gave six weeks' preparation, and succeeded, though several surgeons formulated the opinion that lithotomy was highly risky. For most cases, however, two weeks is sufficient, during which time the patient should be kept reclining in bed, in a warm room, diet selected, light and nourishing; and just a day or two before the operation the diet should be selected, in view of the purgative to be given a day before the operation, so as to make sure that the bowels are free from excreta, and that the aperient acts without discomfort, and probably brings down most of the bowels' contents to the rectum, to be washed out a few hours before the operation is commenced.

As regards the prevention of secondary hæmorrhage, it is my practice to use a rather capacious tube, with "parallel bore," and as large as the wound will admit, retained three or four days; and should the urine drained appear much coloured, or a blood-clot deposit in the bladder, the tube ought to be retained even longer. When the urine comes away colourless, a slightly smaller tube can be daily substituted, gradually reducing until the surgeon's anxiety has passed away. The urine may flow coloured for a few days from the presence of more or less clot in the bladder, the result, perhaps, of mere oozing into the viscus during the few first hours after operating. It is often said that this is of no consequence. A small clot is, probably, of no moment, but except it be small, it may give the patient nearly as much discomfort as a calculi; but should there be allowed for a few hours a large clot, the patient generally shows the signs of irritative fever, and here large perineal tubes with parallel bores become extra serviceable, as small clots can be washed out through them, and large clots can be broken up by the introduction of a suitable long probe, and afterwards washed away; or as I have done, a urethral forceps can be introduced, clot broken and withdrawn, and then thoroughly, antiseptically, washing out the viscus. It is my practice, as I before mentioned, as soon as the perineal tube has answered its purpose, to introduce an india-rubber catheter per urethram, and divert the urine from the wound. The operation is sometimes difficult of performance if the surgeon has not carefully selected his rubber catheters. Some of them are sold with solid ends up to the eye. These, when wire styleted, and introduced, and they begin to pass under the pubes, the stylet comes out through the eye, giving pain to the patient and alarm, perhaps, to the surgeon, who notices a slight bleeding from the perineal wound. To avoid this difficulty, let the surgeon purchase only those rubber catheters which, on examination, he finds are hollowed well past the eye, and feel soft at the end, showing the end is coned hollow, and when about to use the catheter, to draw it over the stylet, so that its eye is on the convex side of the stylet, and also make sure that it does not rotate from that aspect during introduction.

My experience of secondary hæmorrhage consists of only two cases of lithotomy, and one of perineal section.

The mishap in the two lithotomy cases, I attribute to entering the perineum not so low down as I do now; a fault of my earlier operations. The first case was operated upon November 20th, 1868; the second, November 7th, 1873. The first case bled the fifth day after the operation, when the drainage-tube—which was small—not acting, the patient became feverish and delirious. He was placed to sit in warm water, which relieved the constitutional symptoms, but was followed in a few hours by an alarming hæmorrhage. Now there was done—what should have been done before—an exploration of the wound with an oiled finger; tube introduced, and wound plugged around it. This did not answer the purpose, so it was removed, and the wound dilated with a female urethra dilator, and the large clot which I found in the bladder was removed with the urethral forceps. The dilator was retained inside two days, when it was removed, and in its place was introduced a small bivalve rectum speculum, which was removed in three days, and the patient after this did very well. The patient's age was about twenty-five years. The stone was a round mulberry two inches in diameter.

My second case in which hæmorrhage occurred, the tube was removed November 11th, four days after the operation. November 13th, slight bleeding occurred, and the tube re-introduced, and retained three days, which arrested the hæmorrhage. Again, one day after removal of tube, there was free bleeding which was controlled by pressure of the finger on the left side of the wound. This was withdrawn after three hours, and a large tube introduced, and the patient remained free from hæmorrhage until November 27. Then a large tube, with three-quarter's of an inch bore, containing ice was introduced; nevertheless, November 30th, bleeding occurred again, and the bladder became full of clot. This was removed by suction. December 6th, bled again. Now a glass tube was carefully fixed obliquely in the wound, so as to press on the left side of the wound. This was retained until December 22nd, when a rubber catheter was passed into the bladder to drain, per urethram, and the case rapidly recovered after this date.

The third case of hæmorrhage occurred after perineal section to relieve stricture. Blood persistently oozed from the wound for three days, and the patient became so drained that he appeared much blanched, and I decided to put a tube in the wound, and firmly stitch the wound with deep sutures, and thus arrest what was only a general oozing, using a large curved strong needle for the purpose; but, to my astonishment, the blood draining from the suture holes appeared as great as that from the wound, so the sutures and tube were removed, the pelvis well elevated and the bladder well syringed out with strong chloride of zinc solution. This case did well.

The mishap of after incising the bladder, failing to find the stone, has happened perhaps oftener than we suppose, as it is a very pardonable sin to omit reporting such cases. Modern writers upon lithotomy very seldom catalogue this amongst the complications of the operation, or refer to it at all. Lithotomists of the last and early parts of this century frequently referred to this mishap, and the mode of correction. In a famous medico-legal libel case the defendant was supposed to have "scored," when in cross-examining an eminent witness for the plaintiff, a celebrated lithotomist, it was shown that he was unacquainted with the practice of his predecessors under such a difficulty; ignorant of the operation (*à deux temps*). The perusal of the cross-examination in this case first introduced me to the procedure, which

is evidently of Gallic origin. Some time after, whilst searching some of the old medical periodicals, I found some remarks concerning lithotomy by the late Mr. Lizzars, and he gave an illustration, an episode from his own experience. Being called far away from home to remove a calculus, he performed the operation, assisted by the local practitioners; but though he had satisfied himself as to the existence of stone before the operation, on incising the bladder he could not find it. Taking the practitioners aside, he assured them, that from the experience of his predecessors, if they explored the bladder next day, they would find the stone at the incision. After giving them this information, he left for home. His advice was followed; the stone was found, and successfully extracted. From this we may conclude that if a stone cannot be found or be gripped, and afterwards lost, it would be proper practice to extract twenty-four hours after the operation, rather than prolong the initial operation.

The instruments, as shown in the illustrations, were made and excellently finished for me by Messrs. Khroné and Co., London. The angular gorgets (four sizes) being made to suit the probable extent of incision, and the staff (three sizes) suitable for the varying ages.

THE TREATMENT OF CHRONIC ULCERS OF THE LEG.¹

BY J. GORDON BLACK, M.D. LOND., HARROGATE.

SOME years ago—viz., on the 15th June, 1872—the *British Medical Journal* commenced a series of "Reports on the Treatment of Ulcers of the Leg" at the principal London and provincial hospitals. They were carefully and ably conducted, and occupied several weekly numbers. I read them with much interest, in the hope of gaining some fresh instruction upon a subject to which I had given a good deal of attention. However, in this respect the "Reports" were most disappointing reading, and I concluded their perusal with a decided conviction that the treatment of these troublesome and painful affections, at the hospitals named, was tame and inefficacious. Indeed, I could hardly resist the conclusion that, on this subject, I had learnt very little from, but had something to teach, the distinguished surgeons whose various opinions were quoted. Most of them agreed in blaming uncleanness, neglect, want of proper rest, and constitutions impaired by irregular drinking habits, as the chief causes of the ailments under consideration. One London surgeon stated that "he constantly declined attending out-patients with ulcerated legs, feeling convinced that nothing short of a revolutionary change in the habits of the London poor could justify an expectation of permanent relief. Out-patients thus refused attendance were recommended to enter the workhouse infirmary!" One cannot help pitying these poor unfortunates—their last ray of hope extinguished, and thus condemned to the "refuge for the destitute." Well might they join in the Shakespearean satire:

"He hath abandoned his physicians, madam, under whose practices he hath persecuted time with hope, and finds no other advantage in the process but only the losing of hope by time."—*All's Well that Ends Well*, Act I., Scene I.

When these reports were published, skin grafting was a somewhat recent novelty, and its efficacy in the cure of ulcers of the leg was vaunted by many of these authorities, who probably rushed eagerly to its adoption as an escape

¹ Read before the Yorkshire Branch Meeting of the British Medical Association at Wakefield, 22nd February, 1888.

from the very feebleness of other remedies. Different forms of bandaging were recommended by pretty general concurrence; but it was noticeable that no regular system seemed to be in vogue, and doubts as to the permanence of the cure were freely expressed. The main stumbling-block to its success in the hospital out-patient department appeared to be that the dressings had to be frequently renewed, owing to the accumulation of offensive discharges. One would have thought that such patients afforded an excellent opportunity for students to become proficient in neat and dextrous bandaging—a not too-frequent accomplishment—but it did not appear that such facilities were largely used or appreciated. Now, for three or four years previous to the date of these reports, I had been successfully treating all kinds of chronic ulcers of the leg by a simple method of bandaging which, in the absence of any reference thereto, I ventured to lay before the readers of the *British Medical Journal* in a paper published on 31st May, 1873. Since then I have had such satisfactory evidence of its usefulness that I desire to draw the attention of others once more to this plan of treatment. This seems to me the more necessary as I frequently see patients whose cure has been postponed by a sad lack of what may be called practical treatment.

The method I employ is based upon the system advocated by the late Thomas Baynton, a surgeon of Bristol nearly one hundred years ago. In 1797 he published his "Descriptive Account of a New Method of treating Old Ulcers of the Legs." The essential part of this treatment consisted in strapping the whole width of the affected limb with pieces of adhesive plaster spread on calico, after which the leg was carefully covered by a roller bandage from toes to knee. There is no doubt that this was a splendid advance upon previous methods of treatment, which were founded upon no definite principle. Sir Everard Home, Surgeon to St. George's Hospital, who wrote about the same time, actually recommended young practitioners to learn by rote various local applications in order that where one failed to agree with the ulcer another might be tried. Baynton, on the other hand, laid it down as a principle that efficient support should be given to the circulation of a limb, long weakened by chronic inflammation of its tissues and stagnation of its fluids. By aiding the flow of blood and lymph through their proper channels the inflammation was speedily starved out, and the profuse discharge dried up. That such a method is capable, when skilfully and perseveringly carried out, of curing even the worst cases, in a comparatively short time, I quite believe; and Baynton's memory is worthy of being revered as the pioneer. However, there are several drawbacks to the success of this plan in general practice. In the first place the plasters are apt to be stiff, and their edges prove too harsh for irritable inflamed sores. Then again, owing to the rapid accumulation and decomposition of the discharge, it is found necessary to renew the dressings at least once in every twenty-four or forty-eight hours. Now, even if the doctor be willing and painstaking enough to continue his part of the duty to its accomplishment, the patient would frequently fail in a proper attendance. There is no small amount of pain, for example, to be endured by such oft-repeated disturbance of a sensitive granulating ulcer. Every time it is exposed to the air the agony, in many cases, becomes intense until again covered up. Thus, what with the pain, the offensive discharges, the multiplied trouble and loss of time, their courage fails, and the attendances become irregular or cease altogether. Now, the

stiffness of the plasters may easily be overcome by passing them through hot water, as hot as can be borne by the hand. This effects the double purpose of softening the material upon which the plaster is spread, and rendering the latter adhesive. The strapping so treated becomes quite pliant, and may be accurately moulded to a limb without shocking even the most sensitive nerves.

The difficulty of frequent dressings is also simply removable by rendering the plasters, and the affected parts of the limb, antiseptic. So far as the plasters are concerned this object is attained by adding carbolic acid to the hot water through which they are passed. The ulcerated surface and adjacent skin may also be treated with carbolized water, but I prefer to use the sulphurous acid spray. The latter is easily employed without the operator's fingers being soiled, whilst the acid, by stimulating lymphatic absorption, tends to check the discharge of pus. It has, moreover, a very kindly healing action upon any abrasions, vesicles, or pustules which are apt to form during the course of treatment and become troublesome. Unless there is some special reason to the contrary I always use the acid full strength, both upon the ordinary skin and on the surface of the ulcer. Any smarting which may be caused is to be disregarded, for immediately the parts are covered up from the air pain ceases, or becomes insignificant. Briefly, then, my plan of treating ulcers of the leg is to use Baynton's strapping antiseptically, by which means it will be found that dressings need not be renewed oftener than once a week, even in bad cases, whilst the intervals gradually extend, as the cure proceeds, to two, three, or more weeks. Only the most serious affections require more than six to eight dressings.

The following detail may be useful in making the matter clearly understood: The patient washes the limb and ulcer with warm water, taking care to dry thoroughly with a soft towel or handkerchief. Whilst this is going on the doctor employs the time in cutting the plaster straps. These should be long enough to pass round the limb and allow the ends to overlap about four inches; width, two and a half to three inches. A sufficient number having been prepared, and some soft cotton bandage being in readiness, the patient, sitting upon a chair, is requested to place his leg over an ordinary wash-hand basin, so that the heel rests upon another chair. By means of a spray apparatus sulphurous acid is then freely applied to the affected parts, which are to be thoroughly soaked in the acid. This done, about half a pint of boiling water is poured into the wash-hand basin, containing two teaspoonfuls of carbolic acid, and the requisite mixture effected by stirring. The first strip of plaster is now rapidly run through the hot carbolized water two or three times, backwards and forwards, and immediately applied. It is necessary to begin about two or three inches below the lowest diseased part of the skin. The middle of the strip being adjusted to the back of the leg, the ends are brought forwards, and after being crossed, are carefully laid down on the skin. Great care should be taken to avoid undue pressure. Gentle and evenly distributed support, without compression, should be the operator's aim. The edge of the next strip of plaster is made to overlap about one half the width of the first, and then similarly applied, and the others in like manner to the highest. The plasters should cease two or three inches above the highest diseased portion of skin. By means of a towel all excessive moisture of the plasters is now removed. Finally a cotton bandage, two and a half inches broad by seven yards long, is carefully and evenly adjusted,

without undue compression, from the root of the toes to the knee. The kind of plaster I find most useful is the ordinary emplastrum adhesivum spread on brown holland. The patient is now instructed to return that day week for the second dressing, and, in the meantime, endeavour to resist any inclination to interfere with the coverings as applied. In exceptional cases pain, or a sort of neuralgia, over the site of ulcer occurs. When this is bearable it is always best to do nothing, but when very severe much relief is felt by the patient removing the cotton bandage and pouring cold water from a jug upon the plaster strips, as recommended by Baynton. Of course the bandage is to be immediately re-applied, after drying the plasters with a towel. After two or three weekly dressings there appear, in some cases, crops of watery vesicles on portions of the healthy skin. On bursting, these leave small abrasions which at times assume an alarmingly angry look. However, they are not at all important, and are always relieved, and cured, by the sulphurous acid spray. I have regarded them as due either to stimulation of the plasters, or the confinement of normal perspiration. During the intervals of treatment patients should be enjoined to resume their ordinary habits of life, and work, even in spite of pain or stiffness of the limb. Muscular action is of course an important aid to the circulation of blood and lymph through a limb, and is to be encouraged accordingly.

Now in the vast majority of ulcers of the leg no other treatment is at all needed, in fact the management of few other ailments is so thoroughly stereotyped. The preliminary treatment so continually recommended is absolute waste of time; and the endless paraphernalia of lotions, ointments, touchings with caustic, etc., etc., may be put aside. Though the cases requiring skin-grafting must be few indeed, as I have never come across any, there would be no difficulty in combining the latter with the proposed method, and thus getting rid of the necessity of laying up the limb. I would further add that as far as Baynton's strapping, used antiseptically, is concerned, all classifications of ulcers—such as irritable, inflamed, indolent, and varicose—are unnecessary, and likely to mislead, seeing that all are to be treated alike. In my experience the most painful varieties are those where the ulcers are found in the folds of skin around the ankle joint, the veins being tortuous and varicose. The latter feel like masses of thread upon which beads have been strung at intervals. In such cases it may sometimes be advisable to pad a sharp point, or pack an angular cavity, with cotton wool, in the act of applying the plaster strap. "The most irritable ulcer may be strapped if care be used and compression avoided. The horny edges of 'callous' varieties soon soften down and disappear without recourse to so dangerous an excitant as blistering, which may easily set up unmanageable inflammation" (see paper, *B.M.J.*, May 31st, 1873).

When the manufacture of India-rubber had reached such a state of perfection as to allow of the introduction of Martin's bandages, I quite thought that a panacea for ulcers of the leg had been found. The fenestrated variety of bandage, especially, seemed most likely to be successful. It was, therefore, disappointing in practice to discover such serious drawbacks in efficiency that I was obliged to abandon this mode of treatment in favour of my own. The flow of perspiration in many cases seemed intensely excited by the contact of India-rubber with the skin; whilst in others, heat and irritation became so unbearable that patients were refractory and lost confidence in the remedy. Success, where attainable, was, moreover, decidedly quali-

fied by the trouble and inconvenience experienced in the removal and washing of the bandage every night and its re-application the following morning before rising. In the avoidance of such frequent interruptions of treatment will be found one of the great advantages of the method I now advocate.

With regard to the causes of these ailments, I am far from agreeing with many of the opinions expressed in the *British Medical Journal* "Reports." No doubt varicose veins decidedly predispose; but they are common among the rich and well-fed as well as the neglected poor. In many individuals they are the outcome of hereditary weakness. It is very questionable whether the privations, and the degraded and intemperate habits of our poor, are related as causes so much as the various toilsome avocations which require the worker to spend many hours daily in the erect position. Not only under these circumstances is the force of gravity constantly resisting that of the heart, but the latter obtains little or no aid towards the venous and lymph circulation by the due exercise of the leg muscles, which are comparatively inactive for long periods. Many employments also require the individual to carry heavy weights, or to rest the latter, temporarily, upon some part of the upper limb, thus materially obstructing circulation.

I would further suggest that the treatment now recommended may prove of great value in certain congestive conditions of a limb other than those mentioned, where no ulceration is present, and where support to the blood-circulation is not so obviously indicated. As an illustration I would refer to a case of erythema nodosum which I saw recently. The patient was a lady about fifty years of age, of highly neurotic temperament, but otherwise in good health. She had suffered previously from several attacks of this troublesome and painful ailment, which had been somewhat puzzling to the doctors she had consulted, who had on each occasion found much difficulty in effecting a cure. The eruption, as seen by me, extended down the inner side of the right leg from a little below the knee to near the ankle. The tubercular swellings were very painful, and there were much heat and redness of skin. I quite expected to cure the case with iron tonics and arsenic, but they proved of little avail. Whilst pondering over my want of success it occurred to me that as the vaso-motors of the affected area were evidently in a relaxed state, it might be a useful stimulus to the trophic nerve centres to strap and bandage the limb. This was accordingly done. The first dressing immediately gave comfort to the patient and enabled her to walk about again. When it was removed, at the end of ten days, there was such evident all-round improvement that the applications were renewed. No other treatment was needed, and the second dressing cured the case. Whether such a method would succeed in other instances of erythema nodosum I cannot say, but the plan is worth a trial. It might prove most valuable in the treatment of servant girls, for example, if it enabled them to continue their duties whilst the constitutional depression and anæmia usually present were being removed by suitable medicines.

After a chronic ulcer of the leg has been cured it is necessary in many cases to ensure some efficient and permanent support to the circulation through the affected limb, lest a return of the ulceration should occur. This only applies where the regularity of the blood-flow has been seriously weakened by embolic formations, varicose veins, etc. I always take some pains in pointing out the reasons why such patients should constantly wear a well-fitting

elastic stocking, or bandage, and not imagine that a method of cure which has only been applied over a few weeks can remove a permanent or life-long infirmity. Where ordinary care is taken I believe the relapses are few and the intervals of time long. Only last year a lady consulted me whom I had treated for severe varicose ulcer fifteen years ago. During that long lapse of time she had remained perfectly well till within a few weeks of my seeing her again. She had latterly become very careless about bandaging, and also neglectful of her general health. One dressing was, however, all that was found necessary to put her right again.

I shall be glad if this plan of treatment is found as useful in the practice of others as it has been in my own. More especially should I like to see some similar method adopted in the hospital out-patient department, where it would certainly be a boon to many humble sufferers, and would send them "on their way rejoicing."

TWO SUCCESSFUL CASES OF LAPARATOMY FOR SUPPURATIVE PERITONITIS.

BY GEORGE ELDER, M.D.,

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In the *Provincial Medical Journal* for September, 1886, I gave the particulars of a case in which, for an encysted peritoneal abscess, abdominal section and drainage were followed by a successful result, and although since then several laparatomies have been performed by me for the relief of various serious conditions, due to chronic peritonitis, such, for example, as intestinal adhesions, intestinal obstruction, etc.; still it is only within the past few months that further illustrations of suppurative peritonitis demanding surgical interference have enabled me to supplement my original article. The first of the cases, singularly enough, occurred in the practice of Dr. Burnie, under whom also the former case had been, and the second was seen by me, with Dr. Mutch. Briefly, their records run as follows:

Case 1.—Miss F—, æt. thirty-nine years, was first seen by Dr. Burnie, about twelve years ago. There was a history of a fall a year before, since which she had never been free from pain in the lower third of the abdomen. There was at this time a decided ante flexion of the uterus, for which a cradle pessary was placed in position. From then until August, 1887, Dr. Burnie lost sight of her, when she again came under his treatment for persistent pain, with frequent acute exacerbations, over the cæcal region, accompanied with intestinal disturbance, and occasional rises in temperature. There was an area of exquisite tenderness over the cæcum, with some degree of fulness. The ante flexion, for which the patient before time had been treated, still existed, and there was also an intra-mural myoma, which for some time past had caused severe, prolonged, and too frequent menstrual losses. There was also a constant inter-menstrual, irritative vaginal drainage. For months there had been a progressive depreciation in health. Three months' absolute rest in bed, and everything short of surgical interference was carefully tried by Dr. Burnie without relieving her condition, and, after consultation, she was admitted into the Samaritan Hospital for Women, for an exploratory operation.

On December 8th, abdominal section through the median line was performed, and vent given to a large encysted perityphlitic abscess of a distinctly fæcal odour.

On account of the menorrhagia and pain, brought about by the myoma, the uterine appendages were removed at the same time. After washing out the cavity with warm water, a drainage tube was inserted, and the parietes brought together by silk sutures. Beyond a little distension on the second day, the after-progress of the case presented no unusual features: the bowels were well moved on the 11th, and for the first few days, when the discharge was profuse and offensive, the contents of the tube were withdrawn every two hours, and irrigation with a 1-in-50 boro-glyceride solution used. For five weeks after the operation, a glass drainage tube was employed, and then a rubber one substituted. For three weeks longer this was kept in position, shortening it from time to time as thought desirable, when it was removed. On February 9th, the patient who had been getting about in the hospital for over a week, went out well, with a perfectly healed and firm cicatrix.

Case 2.—Mrs. T—, æt. twenty-six years, seen with Dr. Mutch, on November 22nd, 1887. Prior to puberty patient's health had been good; menstruation began at sixteen, and was regular for ten months, when her health failed; the function being then in abeyance for a year. Up till twenty it was again regular, profuse, and, at times, very painful. From twenty to twenty-one, patient was what she called "sensibly deranged;" menstruation again ceased, and during this period a somewhat obscure history of a yellow vaginal discharge, with heat of the parts, and urethral irritation, is elicited. From twenty-one up till within a few months of the present time, the menstrual function has been regular, but been lessening in amount, and accompanied with increasing local disturbance. Since twenty-one she has had one or two pelvic inflammations yearly, with symptoms of threatened intestinal obstruction. Two years ago she got married; coitus has always been painful, so much so that, for several months before Dr. Mutch was called in, it had not been attempted. From last October, patient felt very ill, and could, with great difficulty on account of backache and pain in the right side, get about. This culminated in her being laid up entirely a fortnight ago, with "inflammation of bowels and stoppage." Under appropriate treatment and rest, the urgency of the symptoms subsided until the morning of the 22nd, when she had a relapse. On the same evening Dr. Mutch and I saw her together, when we found the lower abdomen slightly distended, tympanitic, and very sensitive to touch, especially in the right iliac region. The temperature had never been above 100°; yet the gravity of the case was apparent from the general prostration of the patient, and the drawn, anxious expression.

Vaginal examination revealed retroversion of the uterus, mortared in an exudative mass, including the appendages. Abdominal section being agreed upon, the operation was performed at the Samaritan Hospital, on the morning of the 24th. An incision having been made in middle line, easily broken down adhesions were found glueing the intestines to the parietal peritoneum, and to each other. There were also utero-intestinal adhesions, especially on right side. The peritoneum was thickened, deeply injected, and so also were the bowels within sight, and dull. When the separation of the coils of intestine from each other, and the uterus had been effected, a considerable quantity of sero-purulent fluid welled up from the pelvic cavity. At this point the condition of the uterus and its appendages was noted, and so matted together

were they by inflammatory deposit, that with difficulty could they be differentiated. From the firmness and closeness of these adhesions, it was not thought expedient to attempt their removal. A boro-glyceride solution was used to wash out the cavity, and the parietes were brought together as before, and a drainage tube inserted into Douglas's pouch. Drainage was employed till the beginning of the third day, and from the time of the operation till a week after, when the track of one or two of the sutures suppurred and raised it; the temperature was practically normal. The convalescence of the patient was somewhat retarded by this, but on January 4th she was dismissed well.

February 25th.—I have seen patient at home to-day, and she expresses herself as better than she has been for nearly a year. Her only complaint is of some little trouble in bringing about regularity of the bowels.

Remarks: Mr. Treves, at a meeting of the Royal Medical and Chirurgical Society (*vide Lancet*, vol. 1, 1888, p. 322), read a paper on "Relapsing Typhlitis treated by Abdominal Section," based upon a successful case in which he had removed the diseased appendix vermiformis. Doubtless perforative ulceration of the appendix, arising from intestinal concretions, or the impaction of foreign bodies, is in the majority of cases at the bottom of perityphlitic trouble; but where, as in my case, the inflammation had eventuated in a circumscribed peritoneal abscess, it is not wise, I think, to interfere with the appendix, unless obviously diseased, especially as such interference might break down adhesions which had effectually healed the formerly-ruptured organ.

Nothing short of incision and drainage would have benefited the patient, and had rupture taken place into the general cavity of the peritoneum, death would of necessity have quickly followed.

With regard to the second case, it is an instance of general peritonitis, arising from the extension of tubal inflammatory mischief, probably gonorrhoeal in its origin. The virulence of the process is shown by the nature of the effusion; the rapidity and extensive character of the adhesions, and the disproportion which existed between the local symptoms, and the grave constitutional disturbance. If such cases are not soon relieved by operation, general toxæmia quickly supervenes. If it had been possible, without undue violence and risk to the patient's life, to have removed the uterine appendages, a more satisfactory result so far as the future of the case is concerned, would have been attained. Apart altogether from its interest as bearing upon treatment, the conditions found throw a flood of light upon the genesis of intestinal obstruction. It is well known that acute peritonitis by paresis of the bowel brings in its train obstruction, which, if overcome, in many cases wards off impending death. The adhesions caused by peritonitis may, unless thinned and ultimately broken down whilst in their recent state, by intestinal movement; by constricting the lumen of the gut, or forming loops under which coils of intestine may become strangulated; become a constant cause of pain and illhealth, as well as the first step towards a fatal illness. Bearing this in mind, and especially with the light thrown upon the far-reaching and serious effects of local and general peritonitis, as evinced in operations for its chronic forms and *post-mortem* examinations, the time is doubtless within measurable distance when abdominal section in these cases will come into more frequent and early requisition.

OVARIOTOMY IN AGED PEOPLE.

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AMONG the various abdominal sections occurring in my practice during the year 1886 were three cases of cystic disease of the ovary in women, aged sixty-five, seventy, and sixty-seven respectively.

Case 1.—M. A. R.—, æt. sixty-five; married thirty-one years; menstruation ceased fourteen years ago, iv. para; last pregnancy twenty-four years ago. History: Six years ago noticed the abdomen began to swell. During the last four years abdominal pain has increased, the abdomen has become enlarged, and she has been unable to attend to her duties. On examination, the abdomen was found to be extremely distended by a symmetrical fluctuating tumour, reaching into the epigastrium and pressing on the diaphragm as to cause considerable dyspnœa. May 13th.—The patient was placed under ether and the usual incision made through the abdominal walls. Three large cysts were successively evacuated by the trocar, and thirty-five fluid pints evacuated. The pedicle was so broad that it was necessary to transfix and tie it in two places. The abdomen was then closed with silver sutures. The patient recovered without any unfavourable symptom, but as she was much emaciated it was deemed advisable to place her on a water-bed. The pulse and temperature were normal throughout.

Case 2.—R. H.—, æt. seventy; married, vi. para. About eighteen months ago she noticed that the abdomen was gradually increasing, and that during the last three months it had rapidly become larger. She is extremely emaciated. The abdomen measured forty inches round the umbilicus. The distance from the umbilicus to the symphysis pubis measured eleven and a half inches. Her general condition was far from satisfactory. She vomited after every meal. Her breathing was carried on with such difficulty that she had to be supported in bed. Examination of the heart revealed a loud systolic murmur. Bronchitic rales were heard over the whole of the chest. April 5th.—The patient having been anaesthetised by chloroform, an incision of five and a half inches was made through the abdominal wall. The cyst was found to be adherent throughout to the abdominal wall. The adhesions having been broken down, the cyst was evacuated. On drawing out the tumour the uterus followed it, and, as might be expected in a woman of her age, was atrophied, and attenuated to such a degree that it might easily have been transfixed and secured as part of the pedicle. The pedicle was then transfixed and tied, and the abdomen closed. A poultice was applied to the chest the same evening. April 6th.—As she complained of much pain in the lower part of the back, she was placed on a water-bed. April 10th.—The wound was dressed with iodoform, and two sutures removed. April 13th.—The remaining four sutures removed. April 14th.—Loud bronchitic rales heard over both lungs. April 28th.—Wound healed. May 8th.—Patient out of bed and doing well.

Case 3.—B. T.—, æt. sixty-three; married forty years, x. para; last catamenia twelve years ago. She noticed a swelling in the abdomen two years ago. She was tapped ten months before admission into the hospital. There was a systolic murmur of the heart. The abdomen was distended from the symphysis pubis to the sternum. The veins over the abdomen were distended, and there was

œdema of the walls. She measured forty-six inches round the umbilicus. On September 3rd, the abdomen was opened, and the cyst was found to be firmly adherent throughout the whole of its anterior surfaces to the abdominal parietes. These adhesions having been stripped from the abdominal wall, the trocar was inserted, the tumour removed, and pedicle tied with silk ligature. The pulse and temperature remained normal until September 11th, when the sutures were removed and the wound found to be firmly united. The only difficulty arising, being a suspicious looking red surface over the lower part of the sacrum. She was placed on a water-bed, and directions were given that she should be turned over from side to side at regular intervals. On the 2nd October, she left the hospital perfectly well.

My chief object in recording the above cases is to draw attention to what I believe to be the most important factor in the management of aged people in ovariectomy, and that is, a sufficient amount of movement in bed. The ordinary practice is to keep the patient motionless on her back during, at least, the first five or six days after an operation. It is difficult enough for the young and fairly healthy subject to pass through this ordeal without developing bed sores or hypostatic congestions. As a matter of fact, I have seen retroversion of the uterus produced in this way in a young woman on whom I had performed perinæorrhaphy. It has for some time past been my custom to see that the patients are not kept fixed in this way on their backs. In all of the above cases I took particular pains to see that the patients were carefully moved first on to one side and then on to the other, so that they were not continuously lying in the dorsal position. In fact, as far as my experience goes, the danger from bed sores is the only complication to be dreaded after ovariectomy in aged people. It is obvious that the only way of avoiding this is to give the patient change of position from time to time.

CHANGE OF AIR AS A THERAPEUTIC AGENT.

BY ALFRED J. H. CRESPI.

SIR JAMES PAGET, in the Fourteenth Volume of the *Nineteenth Century Review*, has dealt in his characteristically thoughtful, suggestive manner with "Recreation." I have this morning been reading that paper for the second or third time, and can see nothing to add to it or to qualify. Sir James is a man whom any profession might well be proud of, *facile princeps* in his own line, and devoted to it; while, at the same time, finding much interest in other pursuits, and, what is comparatively rare in medical circles, with a charming facility for conveying to the non-medical mind, in the most graceful and appropriate language, the subtlest truths. A subject which an ordinary man only with difficulty understands, and which he cannot for the life of him explain to others without losing himself in a perfect fog, Sir James Paget handles with the mastery of a genius, and presents in such attractive colours that he invests it with a charm that hardly seemed to belong to it. To his popular and practical paper on "Recreation" nothing can be added. But I want in equally general language to say something—not on change of occupation for the hard-worked business man—but on change of scene as a means of restoring the sick to health.

No subject is more commonly handled in hospital lectures. Not a day passes that the student's attention is not directed to the value and importance of change of air—

that is to say, of scene, surrounding water, and residence; and the student starts in practice convinced that change is a most potent and infallible agent for good, and when it disappoints him, as it too often does, he regards the result as exceptional and almost inexplicable. I used to have profound faith in change, and though my own narrow circumstances did not admit of my ever having a change, or, indeed, of getting that recreation which Sir James Paget so wisely and warmly recommends, I used to advise it to others, and it was a long time before I found out how uncertain and disappointing a remedy it is. In a large majority of cases change of air does not benefit the invalid and the convalescent. The trouble, expense, and worry of getting the change are not repaid by improved health, and the medical attendant is mortified at the result—one for which even twenty years of assiduous practice do not always prepare him.

Change of air for the over-worked town resident is invaluable: it may be the one delightful month of the year that cheers him in anticipation and comforts him in recollection. The man who cannot afford a change, or at any rate, a change with an easy mind, knows only half the pleasure of existence. Perhaps, however, I ascribe more potency and enjoyment to change than it deserves. It may be that never having been able, since I commenced my career as a student, to leave home for a single week with a fair command of money, and merely to see the world, I invest it with greater attractions than I should do had circumstances been more favourable. In my own case, I commence my work soon after eight, and go on till midnight, rarely compassing all I want to get through in that time, and having to use a large part of the Sunday to keep pace with the demands and urgent calls upon me. All that Sir James Paget says of recreation—its pleasures, advantages, and value—I should endorse. To leave home for a month, even for a week, is a treat that I have not enjoyed for many years. With an easy mind, just to devote myself to seeing paintings, majestic buildings, interesting foreign cities, or revelling in the exquisite scenery, which no country offers in greater variety than ours, would be a memorable episode in my life. But that must be left to the more fortunate members of the profession, who, commencing their career with the command of large resources, or succeeding to a well-established and lucrative position, have not had to think twice before spending a shilling, and to those opulent commercial magnates who grind life, hope, and strength out of their unhappy white slaves, and while complaining that they are losing money fast, contrive, though beginning with nothing, to retire, after thirty years of comfort and affluence, on an ample fortune to rust away the remainder of their days.

Change of air as a therapeutic agent requires care, and a few simple rules may be of value. It is not enough that the patient should be getting well, and that, in theory, complete change would be beneficial. The first great consideration is—can he leave home with a quiet mind, determined to get good and to return well? Very often, when change is proposed, it is eagerly accepted. Great expense is incurred, and much trouble taken, and the sufferer goes away full of hope. At first the reports are most encouraging; then, improvement halts; and, at last, when the change is over, and the invalid is at home again, no permanent good has resulted. We are all familiar with the death-bed scene of poor Oliver Goldsmith—that good-natured, self-indulgent, dissipated man. Dr. Turten said to him towards the end, "Your pulse is in greater

disorder than it should be from the degree of fever you have. Is your mind at rest?" "No, it is not," answered the dying poet. *There* was the secret—the mind was not at ease, and no change of air could have done much for the careless fellow, so genial, in spite of his many faults, whom Johnson and Burke loved, and for whom Reynolds, when he heard the news of his death, actually laid down his pencil, and left his studio for the day, a mark of mental disturbance rare in the great painter, who could see nothing remarkable, or, indeed, calling for comment, in the masterpieces of mediæval art.

Everyone must have been struck by the great contrast between children and grown-up convalescents in the matter of change. Take a child of twelve or fourteen, with the world untried, unknown, all before him to choose his place of rest. The railway journey, so wearisome to his senior, delights him; every turn in the road opens up an interminable vista of beauties. A smoky manufacturing town, seen in the sombre atmosphere of an English December or January, is as fascinating as the City of Flowers to the scholar and the art connoisseur. A children's party gives him pleasure keen as an international gathering to the weary man of the world. In short, a few humdrum weeks in a most commonplace house are an event; he has no anxiety lest his work is being neglected; he does not fear the rapidly accumulating heap of bills; he does not fret and fume over the loss of precious time; he is not worried by the start which his rivals will get over him. To him it is change in the best sense of the word; he sleeps, eats, drinks better, his heart gets stronger, his pulse quickens, his colour rises. How sorry he is when obliged to return home; how ardently he longs for another such change. Thirty years later, how different all is! The train may whirl him through the loveliest scenes of nature, kind hands may welcome, gentle voices may cheer, all may be done to make the change acceptable and soothing, but in vain. The thoughts return, in spite of himself, to the familiar scenes of life. He has changed his surroundings, but not himself. *Quis exsul patriæ se quoque fugit?*

First and foremost, to get benefit from change the thoughts must not be preoccupied, distracted with home cares. How often have sufferers said to me, when I have urged change, that they could not leave home in comfort: the children, the servants, the household cares, would still be with them. Cumbered with many cares, would sum up the lives of many otherwise estimable women. Great discretion is called for in such instances before recommending change; and with rare exceptions, it is far better clearly to point out that change, to be attended with advantage, must be undertaken with a quiet mind and every expectation of good. Nor is the medical attendant justified in urging poor people to face the serious expense of removing the whole family, so that the invalid should take the cares of daily life with him. The pleasure of the change is, under such conditions, soon over, and there comes the daily increasing anxiety of making both ends meet, and the stinting and contriving to defray the expense. A few weeks of not unmixed pleasure are followed by months of straitened circumstances and painful, grinding economy. England may be the richest country under the sun, though I have serious doubts on that score, notwithstanding Archdeacon Farrar's recent letter in the *Times*. But the exigencies of society and fashion are rigorous, and poor middle-class families seldom feel that they dare rent a small country cottage for a few months, and live cheaply

and economically. Change, if attempted at all, must be carried out with due regard to the opinions of their neighbours and of their class in life, and that means a large outlay that cannot possibly, in too many instances, be faced with prudence.

A large proportion of the persons requiring thorough change consists of middle-aged, middle-class sufferers, who cannot leave their cares behind them, and who are, moreover, far too greatly preoccupied to make removal from home beneficial; and here the medical attendant should frankly point out the difficulties, and should very rarely urge change. People are not always proof against argument, and they will sometimes thank their adviser for his candour and sympathy, and patiently remaining at home, will get far more good there.

Change of air should not be recklessly prescribed for people suffering from chronic and incurable disease, like cancer, consumption, and renal affections in the later stages. The doctor is tempted to promise benefits, which the result will not justify. The patient leaves home, hoping for permanent good, which he cannot possibly obtain. For the first few days he is perhaps better, while his anxious friends at home are in a state of suspense. At last the sufferer gets too ill to bear the return journey, or is in such serious danger that his friends have to be hastily summoned, often at extreme inconvenience. Surely there is great want of wise forethought on the doctor's part here. No medical attendant has any right to send from home dying patients, buoying them up with false hopes, subjecting them to great inconvenience and, perhaps, serious expense, and exposing some strange practitioner to groundless suspicion that he has hastened death by unskilful treatment or inexperience. Candour on the doctor's part will be best for the client, and most honourable to the medical attendant, and he will be acting as he would wish to be done by.

Cases are not infrequent of well-to-do invalids, often self-indulgent, with few cares, and no regard for anyone but themselves. After a time they weary of their surroundings and tire of their doctor, and he, poor fellow! having treated them for ills of nerves and stomach, for sleeplessness and indigestion, for kidney disease and lung mischief, feeble heart and relaxed sore throat; having rung the changes on half the remedies in the "Pharmacopœia," and having in return earned and deserved little thanks, he, I say, begins to think that change of air would be beneficial, and could not possibly do harm. By this time usually the interesting client has lost confidence in the attendant, who cannot do the impossible, and cure diseases that do not exist, improve habits radically bad, and give a thankful, considerate heart. The least severe criticism passed upon him will be that he is an old woman—a curious sting seems to lurk in those words, by the way—who does not understand the sufferer's case. Here, then, providing the client desires it, change may be recommended. But beware of urging change where it is not desired, for depend upon it, good will not result. Moreover, the doctor must not allow his own partiality for certain places to influence him in displaying their attractions before his unwilling clients. However unsuitable the spot chosen may be, or seem to be, the practitioner should feel very certain of his position before venturing to remonstrate, or suggesting some other. If the client has set his mind upon the least prepossessing place in Christendom, he will get more good than from any other. He has reasons, whims, fancies, that weigh with him, and into which strangers cannot enter,

Taking it as a whole, regarding the matter in the light of a philosopher and of an experienced practitioner, I contend that change of air is a less potent factor for good, a less reliable therapeutic agent than commonly supposed, and that it needs using with consummate care and discretion, always following the patient's tastes, and always having due regard to his circumstances. In many cases change is inexpedient; in some, most injurious; in others, it should only be permitted after a long and confidential interview with client and friends, and after the latter have been carefully prepared for the probable results.

It is little to the point that the medical attendant has taken the trouble to make himself thoroughly acquainted with the circumstances and peculiarities of a place, and only recommends one which he knows. Clients will rarely submit to dictation, and no more ungrateful duty falls to the doctor's lot than to give sound and good advice on such points. What he most approves his clients may regard with the greatest disfavour. Accommodation that to him seems unexceptionable, will to them appear just what it should not be. Far better, far easier, to weigh with discrimination all the surroundings of the case—the patient's age, idiosyncrasies, pursuits, temperament, and means; and then, if deciding to advise change, to do so with great caution, following the client's leading, seldom, indeed, pretending to dictate to him. You may put the sufferer in conditions favourable to recovery, but his broken constitution may make improvement impossible, or his unfortunate temper and peculiar tastes may nullify the good he ought to get, and if things go wrong, the doctor will not soon hear the last of it, if he escapes being blamed for being the primary cause of all the mischief.

There remains a large part of the subject to deal with, that for its proper treatment requires a volume—the selection of a place for the invalid whom circumstances justify in leaving home. In summer, or say from the beginning of May to the end of September or the beginning of October, the south and south-west can be fairly counted upon to offer warmth and a good deal of sunlight, and the midland and northern districts are not much behind, from the last day of May to the last of August, in all the requirements for out-door exercise, except in the far smaller amount of sunlight which even at that season they enjoy. In winter, matters are far otherwise. North, south, east, and west, clouds abound, and the cold is seldom bracing or pleasant. Little indeed can be gained by sending a patient from Birmingham or Manchester to Bournemouth or Ilfracombe, that will compensate for the expense of the change and the loss of the comforts of home. Medical advisers are often wanting in judgment in their recommendations. What possible use can there be in sending an asthmatic invalid to Malvern, with its steep hills? Or what is gained by advising a town bird—afraid of a drop of rain, and accustomed to cabs, clean crossings, and dry pavements—to go to a small western seaside watering place in winter, where, as a clergyman once said to me, he had had three weeks' constant rain, and never could venture out for wind and fog? Nor should the doctor descant warmly on the pleasures of the place he recommends. Let him observe a wise reticence. His associations may be all he can desire, but others may feel differently, and the scenes that so much impressed him may not arouse similar interest in them. And yet, in spite of drawbacks, change, with certain limitations, is an invaluable adjunct to medical treatment,

FROM GENERATION TO GENERATION: A PRELUDE TO THE STUDY OF HEREDITY.

By R. A. DOUGLAS LITHGOW, LL.D., M.R.C.P. ED., F.S.A.,
F.R.S.L., ETC.

(Continued from page 102.)

Hepatic Diseases.—The foregoing arguments as to the influence of heredity in diseases and disorders of the kidneys and chylo-poietic viscera, apply with equal force, for obvious reasons, to diseases and disorders of the liver. I need not here recapitulate them in any detail. Of the degenerative diseases of the liver—cancer, cirrhosis, amyloid degeneration, fatty infiltration, etc., it may be safely said, irrespective of their proximate causation, that, at least the majority, if not all of them, are dependent upon constitutional conditions, and that a predisposition to each of these, either in the person of the afflicted parent or of his children, is more or less, but almost invariably, inherited. Let us briefly consider these diseases of the liver in the above-mentioned order, and with especial reference as to how they are affected by heredity. With regard to diseases of the liver in general, Frerichs in his great work remarks that "the data heretofore established are not sufficient to secure to heredity a positive influence." That he was at least mistaken with regard to hepatic cancer, there cannot be the least doubt; and if in one case, why not in all? It is only fair to assume, that at the time this distinguished and original writer published his *magnum opus* (1858), the subject of heredity in relation to disease was comparatively little understood, and that the mind of the author had not been especially directed towards its consideration. It has long been generally acknowledged that the heredity of cancer is well-established, and "that which applies to cancer, in general, self-evidently and as a matter of experience, equally applies to cancer of individual organs."¹ Statistics are not very reliable as a rule, but even these prove without a doubt that cancer is hereditary. Thus of 1127 cases reported by Paget, Cooke, Sibley, Lebert, Lafond, Hess, Moore, and others, 192, or 17 per cent. were found to have been inherited; and I have already elsewhere recorded a case in the practise of the late Dr. G. H. Barlow, in which a lady was the fifth victim of cancer of the liver in two generations.

In such a case as the last one cannot fail to be struck with the hereditariness of cancer; but it should never be forgotten that, although diseases and predispositions, being subjected to the influences of other diseases and predispositions, are not unfrequently reproduced hereditarily in a modified form, yet that the heritable influence always exists in one form or another. Cirrhosis of the liver offers a case in point. What are its causes? (1) Spirit drinking, a predisposition to which is undoubtedly heritable; and who can say that a predisposition to its effects corporeally is not also transmissible? (2) Syphilis; can there be any doubt as to the inheritance of this disease? (3) Malaria, as we have seen in the consideration of the malarial diathesis, is potently hereditary. The other known causes of cirrhosis of the liver are subsidiary, and need not here be considered. Here then we have an affection, the three main causes of which are indubitably subject to heredity, and however diverse in their nature, yet tend to produce a well-known disease of the liver! Here we have an example of the manifold and complex influences of heredity on the human system in relation with its diseases, and it should always be remembered that

¹ Leichtenstern.

there are many cases in which, although like cannot be said to produce like, yet the influence of heredity is potent and effective. When alluding to cirrhosis of the kidneys, I stated that it was frequently observed as part of a constitutional condition characterised by fibrotic changes in vessels and organs; these observations are, however, still *sub judice*, so I shall not insist upon their accuracy, but I have, at least, shown that the causes of cirrhosis of the liver are mainly heritable, and if so, I cannot see why their effects should not be so also. If a predisposition to allied pathological changes or conditions is inherited, as it unquestionably is, I fail to recognise the mode of reasoning which would exclude cirrhosis of the liver—or at least a predisposition to it—from the same category.

Amyloid degeneration, whether of kidneys, liver, or other organ, never appears as a primary affection, but as the result of a pre-existing general cachexia, induced by various morbid conditions usually associated with prolonged suppuration, ulceration of bones and joints, also of soft parts (as in empyema), or with chronic pulmonary phthisis, constitutional syphilis, or other chronic constitutional diseases. Like most other constitutional conditions, the cachexia, however induced, may be transmitted, whether associated with amyloid degeneration or not; and what is still more to the point, according to Rokitsky and other observers, amyloid disease, and especially amyloid disease of liver, has been known to occur actually as a congenital condition in cases of hereditary syphilis. There is therefore no reason why a predisposition to amyloid disease of liver or other organs should not be inherited. If not a product of the scrofulous diathesis, amyloid disease is certainly the resultant of a pre-existing condition closely allied to it.

I may dismiss the consideration of fatty infiltration, or fatty degeneration of the liver, in a few words. Both may be regarded as modifications of the natural fat-forming process; in the first case being brought to the liver-cells with the blood; in the second, originating in the interior of the liver-cells themselves, from the albumen belonging to them. The first partakes of the nature of that general condition which we term obesity or corpulence, a predisposition or tendency to which is handed down from one generation to another; the second partakes of the nature of metamorphosis—fatty atrophy of the cells, resulting from the non-restoration of albumen expended in the preparation of fat. This latter condition is also hereditary, and may involve other organs than the liver, as the heart, etc.

Passing now from degenerative diseases to functional derangements of the liver, I may here briefly allude to cholelithiasis or gall-stones, icterus or jaundice, hepatic congestion, and "biliousness," which are all more or less hereditary. Fauconneau-Dufresne asserts that gall-stones are frequently hereditary, basing his assertion on the experience of the bath physicians at Vichy, who have so many opportunities of observing every kind of liver disease. Be this as it may, we cannot say that gall-stones, or a predisposition to them, are not hereditary, simply because from our inexperience or ignorance we cannot say whether they are or are not. If the views enunciated in the foregoing pages have anything to support them, we should have no difficulty in understanding why they should be hereditary, like other morbid processes, and we can only trust that time and experience will ultimately clear the way from every doubt, either one way or the other. Icterus or jaundice is also hereditary; thus Kerkring mentions an example of a woman afflicted

with jaundice, being delivered in the eighth month of her pregnancy of a still-born child, whose very bones had a yellow colour. This case seems to support the views of such pathologists as Hartmann, Conradi, and others, who believe that in many cases, instead of a mere predisposition communicated by the parents to their children, the disease itself is inherited; and they appeal to experience, by which it is proved, as they allege, that many children are born with diseases under which their parents suffered. We must acknowledge that deformities generally, and especially anomalies in the external parts, as varus, sex-digitism, also diseases of the eye, especially cataract, if inherited are brought into the world with the children; but, on the other hand, in the majority of so-called internal diseases, a predisposition only is more frequently inherited. Probably the true explanation may be found in the following circumstances—viz., that with respect to the majority of internal diseases, it often depends upon the more or less high stage to which the disease has risen in the parents, whether they communicate to their children merely a predisposition, or the disease itself. How it happens, however, that sometimes the predisposition only, and sometimes the disease itself, is communicated, must, like many other questions, for the present remain unanswered. In addition to the case of hereditary jaundice observed by Kerkring, many other observers have seen interesting cases of women, afflicted during their pregnancy with icterus, having been delivered of jaundiced children. No less scarce are the cases where all the members of a family have been attacked by jaundice at the same age; and an especially remarkable one is described by Boerhaave.¹

That there is an especial predisposition on the part of the patient to the hepatic congestion induced partially by dietetic irregularities, peculiar to middle life, cannot be doubted, and if we consider how different individuals are differently affected by free indulgence in nutritious diet and irritative articles of food, whilst at the same time leading a sedentary and inactive life, the reason is not far to seek, for as individuals differ from each other in every respect, physiologically, psychologically, and pathologically, so must each individual differ from every other in his inherited tendencies. How else can we explain the reason why amongst a set of freely-living indolent men one will suffer, in consequence of his mode of life, from hepatic congestion, another from obstruction, another from constipation, another from hæmorrhoids, etc., while others remain free from any such disorders? Apparently the mode of life has much to do with the production of such conditions, but primarily, the inherited predisposition influencing every organ and tissue of different individuals in various ways and degrees, alike in health and disease, constitute the real reason. Virchow has already demonstrated very considerable individual differences in the conditions of the arterial walls: why then should the occurrence or non-occurrence of the above-mentioned conditions under precisely similar circumstances not be accounted for by individual differences in the condition of the walls of the vessels belonging to the portal system; nay, more, to individual differences in the development, nutrition, and innervation of the muscular tissue of the intestines? These relative individual differences of bone, tissue, cell, organ, membrane, and vessels, which are admitted by all competent authorities, really form the foundation of all sound views in pathology, and the more

¹ Steinau.

they are recognised and appreciated, the more will the art of medicine acquire scientific exactitude and increased usefulness to humanity. In the words of Sir James Paget: "Better treatment will follow better diagnosis, and better diagnosis will certainly follow a more exact pathology." Professor Thierfelder, of Rostock, says: "The predisposition to habitual hepatic congestion is often inherited, and may then appear in the same families for many generations. It must obviously be admitted that there may exist a similar predisposition towards a menstrual hyperæmia of the liver. A somewhat analogous condition is suggested also in that form of hyperæmia due to obstruction. In certain affections, for instance, it is not always the liver, but frequently the kidneys or the mucous membrane of the digestive apparatus, that constitute the organ in which the results of over-distension of the entire venous system first of all and most distinctly appear; and with reference, moreover, to the degree of the alterations in the liver, the separate cases present varieties which are by no means invariably proportionate to the extent of the obstructions to the circulation, in consequence of which, as is stated by Botkin, the susceptibility of the liver to the effects of an increased venous pressure cannot be the same in all individuals."

Biliousness, or bilious attacks—however vague the terms, and however incorrectly applied—are very frequently merely attacks of acute dyspepsia or migraine. According to Dr. F. T. Roberts, the most prominent symptoms of a supposed bilious attack are anorexia, furred tongue, a bitter taste, sickness, constipation, and headache, with a feeling of marked depression and general malaise. However such attacks may be designated, everyone knows, at least, what is meant by a bilious attack; and although the liver may have little or nothing to do with them, yet they have from the earliest history of medicine been associated with biliary derangement, and as such they are still popularly regarded. Irrespective of their causation, there can be no doubt that a predisposition to them is frequently inherited, a fact which is demonstrated unmistakably in every-day practice. So far as I know, this is the only case in which temperament may be confounded with diathesis; but as the former term does not imply any proclivity to disease, we may assume that those predisposed to bilious attacks have inherited a constitutional peculiarity which might be more aptly described as of the nature of a bilious diathesis, owing to intensification during transmission. However we may map out the differences between families or individuals, a certain amount of elasticity must be allowed, as they cannot be regarded as hard and fast lines. Thus when we employ the terms—temperament, diathesis, idiosyncrasy, etc., to designate certain classes of individuals, we must remember that no individual can be regarded as a pure unmixed type of either sub-division: no arbitrary line may be said to divide the one from the other, although heredity and variability are the two laws to which they are all subject, and from which all individual differences arise. The above terms can only be regarded as indicating in broad characters the sum of certain types of individual differentiation, and for all ordinary purposes they are explicit enough, as they are easily understood, and without embodying the whole truth, are yet verified by experience. At the same time, it must not be forgotten that every individual presents such a mingling of temperaments, diatheses, etc., that for anything beyond the broadest outlines we must seek still deeper, and further backwards into the long descent of constitutional peculiarities. Whether this bilious predispo-

sition be included under the name of temperament or of diathesis, or of both combined, the fact is, that instead of being as much a distinct type as the other diatheses, it is often rather a modification of, or co-existing with, others. Thus it is frequently associated with the gouty or strumous diatheses, and with the nervous and lymphatic temperaments, and, as Dr. Milner Fothergill says, to recognise such combination in practice, and in the selection of remedial agents, is often more practically useful than an elaborate physical diagnosis, and is especially useful when physical diagnosis is not readily attainable. Whether also the liver, stomach, spleen, pancreas, intestines, or nervous system, be primarily involved in the production of those attacks usually denominated "bilious," the fact is, that they depend, as a rule, upon constitutional peculiarities of viscus, tissue, membrane, cell, vessel, or nerve, which evidence a predisposition, not only inherited, but also transmissible. I have known cases in which these so-called bilious attacks have characterised parents and children through several generations, and the same fact has doubtless been frequently observed by others; and, curiously enough, I have seen individuals in whom the bilious temperament seemed to preponderate, but who had never experienced a bilious attack in their lives. These and similar anomalies indicate the imperfections of the most scientific grouping of the differences between man and man, but like the ideal law of heredity which is never attainable, these groupings, if necessarily imperfect, are yet satisfactory enough to merit the recognition of experience in the present light of scientific inquiry. Like all other sub-divisions of natural laws, they consist of groups of phenomena which, however imperfect or incomplete in detail, are yet sufficiently capable of indicating their dependence upon the parent law as to demonstrate its existence, and in what direction we must seek for the causes of which they are the effects.

When alluding to the temperaments, I was careful to define the term as "applicable to the sum of the physical peculiarities of an individual, exclusive of all definite tendencies to disease," as no special proclivity is involved by them, and stated that they ought to be regarded as merely physiological peculiarities forming a part of the original organisation of the individual. To the original four temperaments—viz., sanguine, nervous, bilious, and lymphatic, Dr. Laycock added two more—viz., the phlegmatic and melancholic; but of these, I agree with Mr. Hutchinson, in regarding the bilious and the melancholic as simply different degrees of the same thing, and that, as life advances, the one is very apt to pass into the other: moreover, that the distinguishing feature in both is one which concerns disease rather than temperament, and which might be more conveniently known as the *hepatic diathesis*. For, as Mr. Hutchinson continues: "It is the proneness to disordered function on the part of the liver, its ready and frequent occurrence, which for the most part stamps peculiarity on both these so-called temperaments. Further, it is much to be doubted whether this facility to hepatic disturbance would be found in association exclusively, or even generally, with any particular cast of the features, or recognisable peculiarities in the general frame." Be this as it may, it appears absolutely necessary that we should recognise a hepatic *diathesis*, the possession of which is usually characterised by oft-recurring attacks of biliousness, and that like the majority, if not all, of the diatheses, this also is hereditary. It is thus advisable to distinguish between the bilious temperament, and the bilious or hepatic diathesis—the former being a question of phy-

siology and race, if not of diathesis also; the latter signifying an easily recognised morbid proclivity, which is pathological, and unquestionably hereditary.

I have now considered the principal degenerative diseases and functional derangements of the liver, with a view to tracing the influence of heredity in each, and we have seen in the degenerative forms of disease referred to, that they each depend upon a pre-existing disposition which is constitutional, and may be transmitted from parents to children, or from one generation to another. We have also seen that the various functional disorders of the liver are subject to the same influences. In the cases of some of the diseases and derangements alluded to, the evidence may not be so strong as in those of others; but in making, so far as I know, the first attempt to show that the pathological processes, no less than the physiological and psychological processes in man are subject to heredity, and in viewing for the first time the entire field of human diseases with that object, some allowance should, I think, be made, if I have been unable to prove my argument in every case alike, especially as the entire subject is comparatively new and hitherto unworked. Here and there the evidence is positive enough; in other cases it may seem neutral, or even negative; but I feel assured that the more attention is directed to the systematic and painstaking accumulation of facts, the more will the positive and confirmatory evidence increase, and the more plainly will it be revealed that, as our bodies and minds are dependent upon heredity, so also does a predisposition to the diseases of both depend upon this great law of our being.

(To be continued.)

"ELECTRO-THERAPEUTICS."¹

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SYLLABUS.

GENERAL PRINCIPLES (provisional).

Action of current.

1. On *diseased* part (*a*) to allay irritation, (*b*) to improve nutrition.
2. On *paralysed* part (*a*) to preserve nutrition, (*b*) to improve nutrition in *diseased* part (reflexly).
3. On *nerve tract above diseased part* to overcome the supposed obstruction.

APPARATUS.

1. Batteries—Two kinds.

I. Galvanic, voltaic, constant or continuous.

II. Faradic, induced, or "interrupted."

Essential properties of suitable batteries.

(I and II) Constancy, accessibility, portability (weight, size, security of contents).

(I only) Galvanometer, collector, key, commutator—their uses.

(II only) Efficient graduating apparatus.

2. Rheophores—Form, length, connections.

3. Electrodes—Form, size, position.

Positive or Anode; Negative or Kathode.

APPLICATION OF CURRENT.

1. Preparation of skin—moist or dry.
2. Methods—stable, labile, interrupted, voltaic alternatives.
3. Strength of current.
4. Duration of sitting.
5. How often to be repeated.
6. When treatment should be commenced, and how long continued.

THERAPEUTICS.

1. Pain—Neuralgias.

Special forms—facial, cervico-occipital, sciatica.

2. Spasm.

Special forms—facial, trismus, torticollis, asthma.

3. Paralysis.

(1) Sensory only—generally hysterical.

(2) Motor or motor and sensory.

a. Cerebral—hemiplegia.

b. Spinal—anterior poliomyelitis, lead paralysis, paraplegia.

c. Peripheral—facial, musculo-spiral, diphtheritic.

4. Miscellaneous—Hysterical paralyses.

Aphonia.

Rheumatic joints.

5. Electrolysis—Principles.

In treatment of nævi, warts, moles, and stray hairs.

ELECTRO-THERAPEUTICS are in a transition state. Exposed to all the fallacies that beset therapeutic investigations, they are emerging but slowly from a condition of absolute empiricism. The instances are still few in which we can offer an explanation—in the least degree adequate—of the rules which determine the details of our procedure. It is something to be able to speak with certainty about details, but it would be infinitely more to be able to formulate principles from which those details would be necessary deductions. I have said this much, lest you should think that the provisional principles I have put down at the beginning of the syllabus, are universally accepted inductions. They are not. They are simply the ordinary methods of procedure expressed in general terms. I have adopted them merely as working theories, to be cast aside as soon as better ones can be found. Nevertheless they will, I think, prove useful if only for illustrative purposes.

If you will refer to them, you will find that *three* regions are mentioned as possible points for the application of electric currents: (1) that part, generally of the nervous system, which is itself diseased; (2) those parts whose functions are affected in consequence of such disease; and (3) that part of the nervous tract immediately above—that is, just central to—the lesion.

Still further: you will find it stated that currents may be applied directly to diseased parts for one of two objects: (1) to diminish irritability, whether in the form of spasm, or of pain; and (2) to improve the condition of nutrition, such for instance as in hemiplegia and paraplegia. The distinction between these two actions is mainly clinical. It is quite possible that we diminish irritability by improving the nutrition, and that in improving nutrition we allay irritability. But into these questions we cannot now enter. Again: you will find under the second heading that currents are applied to paralysed parts themselves, in order to preserve their nutrition; for example, the local galvanisation of muscles in hemiplegia or in infantile paralysis. This is the use of electricity with which probably you are most familiar. Once more: a lesion in a nerve trunk has been compared to a plug in a water pipe, and it has been suggested, that just as increased pressure may force the plug out of the pipe, so increased stimulation of the upper healthy portion of the nerve may do something to overcome the resistance in, and thus enable the impulse to be transmitted through, the previously diseased portion. Very frequently this method is unavailable; the lesion being too high up—so high, that the still higher healthy part is inaccessible. The difficulty is to some extent met by reflex action. By stimulating the efferent nerves of a limb, we hope to overcome the obstruction situated high up on the

¹ A lecture delivered at the Charing Cross Hospital, in the Post-Graduate Course, 1887—1888.

effluent tract. This then furnishes us with a second reason for the local application of electricity to paralysed parts; and if it does not explain, it at any rate helps us to remember, that sometimes one form of current, and sometimes another, is most beneficial in paralyses due to central causes.

To put the facts in another form—we have four possible objects. *One* is to preserve the local nutrition of the paralysed parts; while the other *three* are efforts to attack the diseased area: (1) by acting directly upon it; (2) by directly stimulating the part above it, and thus trying to force a passage through; and (3) by reflex action to produce the same result when we are unable to apply the current directly.

We will now pass to a consideration of the apparatus needed for electro-therapeutics. I cannot in the time allotted me go fully into the construction of batteries. I propose to confine myself to some few practical considerations that may aid you in estimating the merits of different batteries. Two kinds of battery are needed. These may be supplied in a single box or in separate boxes. In this matter you have only to consult your own personal convenience. The two kinds are known by the various names printed on the syllabus. I have nothing to add to these, except the remark, that the commonly used term "interrupted" is inadmissible, as it is often used in quite a different, and quite a legitimate, sense. I put it down here merely to warn you against the confusion that may arise from its use.

All batteries should be constant in their action, readily accessible, and portable. By portability I mean light weight, small size, and the construction such that the contents will not easily be spilt. Unfortunately it so happens that the more portable a battery, the less constant, and the less accessible are its parts. If you require a battery for use at your own house only, portability becomes a consideration of less importance; so get one with large cells, and with the parts readily accessible. If, on the other hand, it is to travel, get one as large as you can conveniently take charge of yourself. While it is on its journey never lose sight of it. It is better to err on the side of having a battery too large rather than too small; and when one does not happen to live in an atmosphere of instrument-makers, it is a great advantage to be able to find out the exact nature of a defect, and possibly to be able to remedy it. It is one of the disadvantages of small batteries that this is impracticable. Shape is of some moment. Batteries contained in *oblong* boxes are more portable than those in *square* boxes. Supposing, for example, that you need an ordinary faradic battery, worked by one, two, or three cells, and a voltaic battery, with forty cells; the most portable arrangement would be to have two oblong boxes, one containing the faradic battery, and about fifteen cells of the voltaic, the other the remaining twenty-five cells.

Now beside the size, shape, and mechanical attributes of batteries, comes the question which is the best kind of cell. The choice lies between two types. There is the *Leclanché* cell, or one of its many modifications, on the one hand; and the *Stohrer*, or some form of sulphuric acid cell, on the other. My own preference is altogether for the former. They certainly require much less attention, and the contents are not likely to be spilt. In the case of the acid batteries, on the other hand, frequent changing of the fluid is necessary; and this, when travelling, must be carried separately, and added to the battery at the

journey's end. Nor even thus is sulphuric acid a pleasant travelling companion. It is only fair to add that modern manufacturers have made the cells so long and narrow, that the chance of spilling the fluid is reduced to a minimum. Against the *Leclanché* it may certainly be urged that it is easy to do serious damage if the printed directions concerning its use be disobeyed: this leads me to say that directions clearly stated, distinctly printed, and firmly affixed to the inside of the lid of the box, should be issued with each battery. To sum up: large *Leclanché* cells best ensure constancy. Accessibility you can judge of yourself, but never get a battery without clearly comprehending the connections and uses of the different parts. To ensure portability, get oblong shaped batteries, and *Leclanché* cells, limiting the size only by the weight you are prepared to put up with. If you must give up anything, give up the accessibility; and if the battery is for *home use*, and you do not mind extra trouble so much as extra expense, you can get acid cells, for they are cheaper. And here I must leave the matter.¹

We have now to discuss the essential accessories of galvanic batteries:

Firstly, the battery must be provided with some piece of apparatus by which you can measure the exact dose of electricity you administer. It is absolutely and utterly useless to talk about using six cells or twenty cells. You may get with six cells, under some circumstances, a stronger current, than with twenty under others. You might as well tell your patient to take, three times a day, as much medicine as he could drink in a minute. One patient would take a drachm, another a pint. The number of cells employed only tells us the force we are bringing to bear; the strength of the current, which is really passing, will depend, not only on the initial effort, but as much upon the resistance encountered. We require, therefore, an accurate measure of the actual current passing, and this is provided by a *galvanometer*. A galvanometer is employed by everyone in diagnosis, but is still omitted in most batteries intended for therapeutical purposes. It is, in electro-therapeutics, what weights and scales and measures are to ordinary prescriptions. The electrical unit is now universal, and that fraction of it which has become the *medical unit*, is just as universal; so that all medical galvanometers are graduated according to the same scale. This unit is known as a milliampere. The position of rest which the indicator of the galvanometer assumes, while the current is passing, shows its strength in milliamperes at any given time. For ordinary purposes a range of from one to twenty milliamperes is sufficient. But if it is to do duty for *electrolysis* as well, it must measure up to 200 or 300. When the battery is bought by the patient, and the cost of the galvanometer considered to be too great, that piece of apparatus may generally be hired.

The second accessory is a *collector*. Supposing you wish to pass a current of five milliamperes through a definite part, you cannot exactly foretell how many cells will suffice. It is, therefore, advisable that you should have a ready means of altering the number of cells in action. The instrument consists of a dial and a movable indicator, the position of the latter showing the number of cells in action. This is a great convenience, but not an absolute

¹ Sulphate of mercury batteries have a good reputation. They are more portable than acid batteries, and the cells are more easily recharged than the *Leclanché* elements. I have not had any personal experience of them.

necessity. The same result can be obtained by changing the position of the connecting wires. But collectors are not expensive. They save time, and should certainly be provided in a battery intended for your own use. In a patient's battery, where time is of far less importance than expense, they may be omitted.

A *key* is an instrument for suddenly starting, or suddenly discontinuing the current. The object of a *commutator* is to rapidly reverse the poles; that is, to make the positive pole negative, and the negative positive. The two are generally combined in one piece of apparatus. Both key and commutator are essential in a battery intended for diagnostic purposes, and a great advantage in those intended only for treatment. To sum up: every battery should be provided with a galvanometer; this is essential. Collectors, keys, and commutators are extremely useful accessories; but are not absolutely essential unless the battery is intended for diagnosis or for your own personal use.

Into the general construction of faradic batteries there is no time to enter. Nor is this a matter for great regret, as you are not likely to go far wrong in your choice of one. In their construction sulphuric acid cells, of the Stohrer type, are generally used. I think this is a mistake. I have tried both, and prefer the Leclanché elements. You will have to decide between two kinds of coil: one in which the distance between the primary and the secondary coils can be altered at will, and the strength of the secondary current, which varies with the distance, thereby regulated; in the other the secondary coil is wound directly over the primary, the strength of the latter being regulated by a central pin, and that of both primary and secondary by the intervention of a *rheostat*. This instrument introduces into the current an amount of resistance, which can be definitely regulated, and the current accordingly proportionately diminished. The arrangement in which the two coils are separate—that is the first—is probable the better.

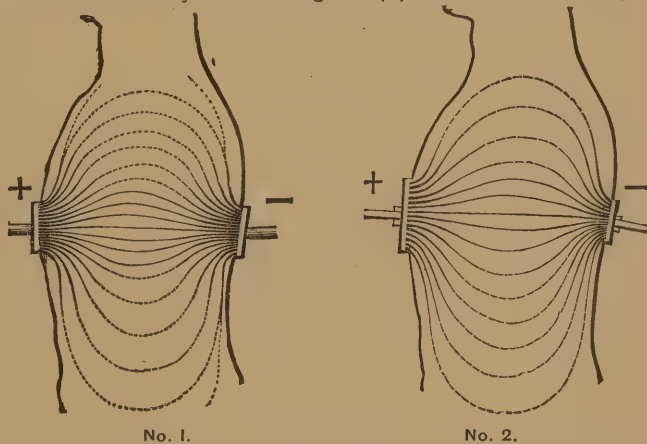
The conducting wires which convey the current from the battery to the body are technically known as *rheophores*. Each should be made of a number of fine wires, enclosed in a small india-rubber tube, or otherwise effectually insulated. Each cord should be one and a half or two yards long. The ends of the wires should be both soldered and tied to rigid metal terminations. If only tied, they become loose, and the current is consequently interrupted. If soldered without supports, they become brittle, and break at the point of soldering. There are various mechanisms by which these two difficulties may be avoided.

Electrodes are the instruments by which we apply the current to the body. When it is to be applied through the skin, they consist of plates of metal or of carbon covered, according to fancy, with a thin layer of fine sponge, or with three or four layers of coarse flannel, or with amadou; over this a thin cover—linen, thin flannel, or wash leather is slipped. The cover should be easily removed, easily washed, and easily replaced. The smaller electrodes are disc shaped, and can be screwed to an insulated handle; the larger are oblong or elliptical, and fitted, sometimes with a handle, and sometimes only with a binding screw. The larger electrodes should invariably be made of such metal as tin or lead, so that they can be accurately shaped to the part to which it is intended to apply the current. For general purposes, four are requisite. One which is called *small* should be $\frac{3}{4}$ in. in diameter; the second or *medium* electrode, $1\frac{1}{2}$ —2 in.; the third, called

large, about 2 in. by 4 in.; and then lastly, and this chiefly for applications to the head, one about 3 in. by 6 in., or *very large* electrode. If any still larger are needed, as in Apostoli's method, a layer of modelling clay is interposed between the metal electrode and the skin.

For internal application special electrodes are required. The principles running through them all are: that the instrument is shaped to reach the point of application, and that it is insulated almost up to the end to prevent the current from escaping before it reaches the extremity. The electrode known as the *faradic brush* is, in its best forms, not unlike a miniature hair brush, in which, for many of the bristles, are substituted pieces of fine wire. All metal work in electrodes should be thickly plated, as brass rapidly corrodes. It is difficult to give clear rules which shall form efficient guides to the size of the electrodes to be used. If in doubt between two, use the larger, especially when deeply placed parts are concerned. The larger the electrode, the less the resistance, and the stronger therefore the current. But the larger the electrode, the more diffused the current, so that the degree of concentration required is really our limit of size. More explicit directions will be given when we come to the special diseases.

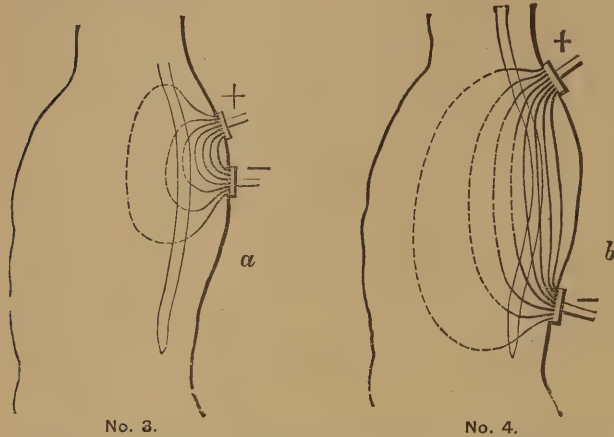
The position of the electrodes depends on considerations I can best illustrate by means of diagrams. In (1) the electrodes, equal in size, are represented on opposite sides of the body, and the current is supposed to diffuse itself after the fashion shown by the shading. In (2) one electrode is large,



by which means a stronger current enters the body than in (1), and a greater concentration is obtained at the smaller electrode. In (3) and (4) the effects of placing the electrodes near together, or far apart, are shown. From them it will be seen that when the spinal cord, or any part, an inch or more beneath the surface of the skin, is the object of treatment, the electrodes must not be placed too near together. The electrode attached to the positive pole of a battery, is called the positive electrode or anode; that attached to the negative, the negative electrode or cathode. Generally speaking, the action of the positive electrode is soothing, and that of the negative stimulating. The chemical changes at the negative pole are so marked, that unless the electrode be large, its continued application to any one part is likely to produce local inflammation. Apply your electrodes firmly. Nothing is more irritating to the patient than the frequent interruptions of the current due to hesitating manipulation.¹

¹ Erb Electro-therapeutics Translated by Dr. de Watteville.

In describing to you the exact procedure adopted in the treatment of the various diseases, it will be necessary for me to discuss with you, not only the kind of battery, and the size and position of the electrodes to be used, but also to enter into certain other details, briefly stated in the syllabus under the heading of "Application of Current."



No. 3.

No. 4.

The skin offers an enormous resistance to the passage of the electric current. The drier the skin, the greater the resistance. The moister the skin, the less the resistance; hence the rule that the skin over which it is intended to apply the electrodes must be thoroughly moistened. And, as hot water is a better conductor than cold, and as it more effectually moistens the skin, hot water should be used. Once more: acidulated water is a better conductor than ordinary water, so that it is well to add a little acetic acid before using it. To recapitulate, well moisten the skin with hot acidulated water. Formerly salt and water were used, but salt corrodes, and forms incrustations on the electrodes; on the whole, it is more nuisance than it is worth. A small sponge may be used with advantage to effect a preliminary moistening before the electrodes are applied. Due precautions must be taken to prevent wetting the clothes. There is one exception to the foregoing rule. It is this. When the faradic brush is to be used the skin must be dry, and not only dry, but very dry. The current is, in this case, intended to stimulate, especially the ends of the sensory nerves. With this object in view, the skin is first wiped dry with a towel, and then freely powdered with ordinary toilet or starch powder. This is the only exception. In all other cases moistened electrodes are applied to the moistened skin.

There are four methods of applying the current. In the *stable* method the electrodes are first placed in position; a weak current is then passed, insufficient to cause the least sensation, the position of the electrodes being all the time maintained. Gradually the current is increased until the required strength is reached. This is maintained for the desired time. Then, as gradually as before, the strength of the current is diminished, until finally it is shut off altogether. The electrodes are then removed, and the process is at an end. In this way, with large electrodes, very strong currents may be borne with no sensation worse than a little tingling; whereas the *sudden* application or cessation of the same current might be absolutely dangerous to life.

The second is the *labile* method. This bears the same relation to the *stable*, as the temperature in remittent does

to that in continuous fever. The electrodes, as in the former method, are first placed in position, and the current similarly raised to the desired strength. Then one of them, usually the negative, is moved to and fro over the part you may wish to influence. The electrode is never raised from the skin, and the current, therefore, is never broken; but, as may be seen by watching the oscillations of the galvanometer, its strength varies within distinct but moderate limits. Its main action seems to depend upon the fact that successive portions of the subjacent parts are thus brought rapidly under the action of the current, as the electrode passes over them. Without producing violent shocks, the general effect is stimulating.

In the *interrupted* method the current is actually broken. As before, one electrode is fixed, and the other—again the negative—is *painted* over the affected part. This method is more stimulating than the preceding. If used about the head or neck, it must be employed with great care.

Lastly, the most stimulating process of all is to place the electrodes, turn on the current, and then, by means of regular movements of the commutator, to rapidly reverse the poles—making each alternately positive or negative.

The strength of the current to be employed depends so much upon the special features of the case that it is difficult to formulate any rules having much practical value. Stronger currents may be used with the *stable* method than with any other. When applied to the head the current should always be weak—not more than from three to five milliamperes. On the other hand it may be necessary, when dealing with peripheral nerves such as the sciatic, to employ a current-strength of from twenty to thirty milliamperes, though ten to fifteen are generally sufficient. In electrolysis still stronger currents are used.

The whole "sitting" should rarely exceed a quarter of an hour; and the current should not be applied to any one part for more than from two to five minutes. When applied for its sedative effects two or even three sittings a day may be necessary. In the majority of cases an application every day, or every other day, is sufficient.

In vascular and acute inflammatory lesions of the brain and spinal cord electrical treatment should not be commenced until a month after the onset of the disease. In other cases the treatment may date from the time the patient comes under our care. How long the treatment should be continued is a question to which the answer is dependent on the nature of the disease and the results of the treatment.

I have put *neuralgia* first in the list of diseases benefited by electricity, because, in my experience, there is no condition in which its immediate achievements are more marked. What I have to say concerning the treatment of both pain and spasm, refers only to those varieties for which no removable cause can be made out; such, for instance, as diseased teeth or local pressure. To return to neuralgia, the general method of procedure is as follows:—use the continuous current and the *stable* method of applying it. Search carefully for tender spots. Place the positive pole over, or a little centrally to them, and the negative pole a few inches nearer the periphery. The exact distance between the electrodes depends on the depth of the nerve from the skin, according to the principle illustrated by diagrams 3 and 4.

The electrodes should be large, whatever current is used, and *very* large if the stronger currents are required; four to six milliamperes are often sufficient to cause relief, but not infrequently ten, fifteen, or even twenty, may be needed.

The current is maintained for four, six, or eight minutes, and then gradually shut off. Relief should occur at the time. The process should be repeated once or twice during the day, especially if, after temporary relief, the pain return. Half a dozen applications will, in many cases, effect a practical cure. If this plan fail, apply the positive electrode to the most peripheral of the tender spots, and the negative to the point nearest the origin of the nerve. Subsequently apply the positive to the other tender spots. Occasionally, faradism, employed in a precisely similar manner, will succeed where galvanism has failed. Still more rarely the faradic brush, attached to the negative pole, while the positive is placed over a central part (moistened) will be successful.

As regards the special forms of neuralgia—if the *fifth* is affected, place the positive pole over the exit of the painful branches, and the negative at the nape of the neck. The infra-orbital is the branch least amenable to treatment. *Cervico-occipital*, or neuralgia at the back of the neck, is best treated by placing the positive pole at the points of exit, and the negative on the vertex; or, failing this, on the sternum. No current applied to the head should exceed five milliamperes, and two or three are often sufficient. *Sciatica* often presents very encouraging results. Apply the positive electrode over the sacro-sciatic notch, and the negative six inches lower down. Gradually move the electrodes down the course of the nerve, maintaining the distance between them. Use very large electrodes, and strong currents—twenty milliamperes, or more if necessary. Let the whole sitting last ten minutes.

The treatment of *spasm* is much less satisfactory than that of neuralgia, and generally fails. Occasionally, as in this disease, tender spots may be found along the course of the nerves supplying the affected muscles. If you find any, deal with the case exactly as if it were one of neuralgia. If you do not, and if, as in many cases, you are unable to determine whether the causative lesion is central or peripheral, you must deal both with the centre and periphery. For the centre use the continuous current, the stabile method, a strength of four milliamperes, and pass the current for five to seven minutes. Apply the treatment daily. Very large electrodes should be used, the positive over the centre, and the negative at the nape of the neck. The treatment of the periphery is less definite than that of the centre. Sometimes a sedative treatment, like that employed for neuralgias, is most effective; sometimes a stimulating one, as strong faradism or voltaic alternatives. In all cases the electrodes must be applied along the course of the nerve as before described. If all these fail, the faradic stimulation of some distant part is said to be occasionally beneficial. As regards the special forms—in *facial* spasm, turn your attention principally to the centre; in *torticollis* and in *trismus*, to the peripheral nerves. In *torticollis*—or wry neck, as it is generally called—faradism of the muscles of the opposite side is, for some occult reason, occasionally of great service, but many cases resist all treatment.

Electricity is occasionally of use in *asthma*. It is employed with a view of cutting short the paroxysm, and in lengthening the intervening periods. Of this I have had no personal experience, but the condition is one which taxes our therapeutical resources so severely, that we gladly welcome any possible remedy. It is recommended in those cases in which no source of peripheral irritation can be discovered. The plan which seems to be most frequently

successful is the galvano-faradisation of De Watteville, or in other words, the simultaneous passage of the galvanic and faradic currents. Failing this, use the faradic current alone. Place the electrodes several inches apart in the interval between the nape of the neck and clavicle, as experience may determine. This is to cut short the attacks. During the intervals, regular stabile galvanisation of the vagus from the nape of the neck to the epigastrium seems to be the most satisfactory treatment.

We have now to deal with that large class of cases grouped under the term paralysis. Paralysis which is wholly sensory is often hysterical. When this is the case it should be treated by the faradic brush. The skin must be dry and powdered. The secondary coil of the battery should be used. A moist electrode is attached to the positive pole, and applied to some indifferent point, such as the sternum. A current which just stops short of producing pain should be employed. Occasionally an uninterrupted voltaic current, with frequent reversals of the poles, will prove even more satisfactory. The prognosis in these cases is good.

In *hemiplegia*, no electrical treatment should be commenced until a clear month after the onset of the paralysis. In all cases in which late rigidity has not set in, it may be tried; but it is only in those of a few months' standing that much benefit is likely to ensue. If no improvement occur after two months' treatment, it need not be continued. The parts to be brought under the influence of the current are (1) the diseased centre and (2) the paralysed limbs. Commence with the continuous current. Connect a large electrode with the positive pole, and fix it at the nape of the neck.¹ The negative pole is then placed on *three* different parts successively. (1) By means of a very large electrode apply it to the head, so that the diseased area shall lie in the tract between the two electrodes. The method must be strictly stabile, the strength three or four milliamperes, and the duration two to three minutes. (2) Transfer the negative electrode to just below the ear with the same precautions, but with a current strength of four to six milliamperes, moving it, at the end of three minutes, to the similar place on the opposite side, for the same time. (3) Lastly, the negative pole should be applied by means of a medium electrode to the paralysed limbs, which should be rubbed with it, somewhat vigorously, according to the labile method. About four minutes is spent over each limb. The current employed is still stronger, generally about ten milliamperes. The whole sitting thus lasts rather more than fifteen minutes. It should be repeated once every day, or every other day. The only exception to this procedure is that the primary current of the faradic battery may occasionally be substituted for galvanism when dealing with the paralysed limbs themselves.

In spinal diseases the guiding principles are similar. Under the term "*anterior poliomyelitis*" I include all conditions, whether in children or in adults, depending upon acute or sub-acute inflammation of the anterior cornua. As in hemiplegia commence treatment a month after the onset. First treat the diseased area of the cord by covering it with a very large positive electrode, placing the negative on the front of the body. Use a current strength of five to ten milliamperes, and pass the current for three or four minutes, according to the stabile method. Then remove the nega-

¹ This method of procedure is advocated by De Watteville. It is certainly more successful than the common plan of merely treating the extremities.

tive electrode, and with one of a medium size, substituted for it, rub the paralysed parts of the limbs. The current should be strong enough to contract the affected muscles, but not strong enough to contract their opponents. This is a point often neglected. Ten or fifteen milliamperes are generally needed, and five minutes should be devoted to each affected limb. When dealing with children, use no current at all during the first sitting. This is in order to accustom them to the machinery. It is worth a great effort to be able to galvanise a child regularly without your treatment being the daily terror of its life—as it too often is.

Lead poisoning need not detain us. Whatever be its pathology, treat it as if it were an affection of the anterior cornua; that is, exactly like the preceding class.

Paraplegia, when due to inflammatory conditions, is very generally benefited by electricity. As in the two previous groups, do not commence your treatment for a month, and use the galvanic current. Again, as in hemiplegia, apply the positive electrode to the nape of the neck, and the negative on *three* places in succession; first of all just above the lesion; secondly, just below it; and thirdly, to the lower limbs. The current in the first case should be from five to eight milliamperes, in the second from ten to twenty, and in the third, where a smaller electrode is used, about ten, or just sufficient to produce muscular contractions. Two minutes are occupied with the first, two with the second, and two or three for each limb. In the first and second the stabile method is used, and in the third the labile. Repeat the sitting every other day. Special attention has often to be paid to the bladder and rectum. The easiest method is to place large electrodes over the sacrum and hypogastrium respectively, or over the hypogastrium and perinæum, and then to reverse the poles every second for about two minutes; or else to employ faradism in the same fashion. There are other methods involving the introduction of electrodes into these viscera, but into the precautions essential to their success I have now no time to enter.

Peripheral paralyses are so numerous that I can only refer to a few of them. If we can get at that part of the healthy nerve situate immediately above the diseased portion, the treatment is simple enough, and is analogous to that employed in both cerebral and spinal cases. The positive electrode, varying in size according to the nerve, is placed just above the diseased area, while the negative is applied (1) just below it according to the stabile method; and then (2) to the peripheral distribution of the nerve, according to the labile method. In *facial paralysis* we are rarely able to get behind the disease. Empirically we place a positive electrode behind the ear, and, with the negative, sponge according to the labile method the various muscles it supplies. Every muscle should be individually treated, and if possible, made to contract. The current strength needed may be as little as two milliamperes. Sometimes a current of six to eight milliamperes is requisite, but in many cases it cannot be borne. It is quite possible that this treatment acts reflexly, and this is still more probable in those cases where the faradic current has been substituted for the galvanic, and improvement resulted. An application every other day for five minutes generally suffices.

In *diphtheritic paralysis*, if either legs or arms be paralysed, they should be treated according to the rules laid down for poliomyelitis. Recovery of the soft palate may be accelerated by electricity. Use a galvanic current; apply the

positive pole to the nape of the neck, and the negative, by means of a suitable electrode to the soft palate, while the patient is taking a deep breath. From the nature of things the *interrupted* is the only method that can be employed. Three to four milliamperes are quite sufficient, and, as the resistance in mucous membranes is less than that of the skin, very few cells will produce the desired strength.

About *hysteria* I have little to say. Treat the disease according to its presumed locality, whether it be due to functional or organic causes. There is this difference: if the condition is functional, galvanism is more likely to fail and faradism to succeed.

Aphonia if hysterical, may often be cured or relieved by the passage of a current transversely through the larynx. Use the galvanic current according to the interrupted and reversing methods. Place medium sized electrodes on each side, and pass, for three or four minutes, currents not exceeding five milliamperes. If this fail, try faradism; do not, as a rule, attempt intra-laryngeal treatment.

The pain of chronic rheumatism is occasionally relieved by the passage and reversals of currents transversely through the affected joints; but only in those cases where not more than one or two joints are implicated.

In the few minutes left at our disposal we will consider a few of the more surgical applications of the electric current. For these the galvanic current alone is used. To the galvanic cautery I have no time to allude. The procedures to which I refer are founded upon what is known as electrolysis, that is, on the chemical and, therefore, structural decomposition, which goes on so long as the current is passing; but only in any marked degree when the electrodes are metallic and small, or the current powerful. For this purpose the electrodes take the form of needles. If they are made of gold, or of platinum, they are unaffected by the decomposition occurring in this neighbourhood, and therefore remain clear and bright throughout the operation, but are often too flexible to pierce the skin easily. If made of steel the positive needle becomes eroded from the action of the oxygen and chlorine, and adheres to the tissues. Its forcible withdrawal frequently produces hæmorrhage; but at the same time it forms a firmer clot. The tendency to hæmorrhage can be prevented by reversing the current for a few seconds before the needle is withdrawn. With small nævi it is better to insert only one pole. This you may do by means of one, two, or even more needles. If the nævus is quite superficial, or if you are dealing with port wine marks, you should use the negative pole, as the destruction of tissue is essential to success, and the negative pole does this more thoroughly. If, however, the nævus is other than the smallest, and particularly if any part of it be subcutaneous, it is safer to confine yourself to the positive. If you wish to avoid the destruction of the skin you perforate, your needles must be carefully insulated to within a fraction of an inch from the point, or local sloughing of the skin is liable to occur. The danger is much greater in the case of the negative pole, especially as even the insulating material is frequently dissolved off it by the action of the current. Always use fine needles.

From these diffuse recommendations you will gather that you may have one of two objects in view: (1) To produce firm clothing in the vessels with subsequent obliteration of them; and (2) to destroy superficial areas of the skin which

shall be replaced by a thin unnoticed scar, producing less disfigurement than the original condition. In the first case the needle is attached to the positive, in the second to the negative pole. The pole which is not inserted should be placed by means of a very large electrode over the moistened skin in the neighbourhood of the nævus. Electrodes for this purpose should consist of a flexible band which may be made almost to surround the nævus. Occasionally in large nævi both poles are inserted. When this method is adopted, two, three, or four needles are attached to each pole. The needles are arranged alternately and parallel to each other, so that a negative needle is situated between two positive and *vice-versâ*. Great care must be taken lest they should touch one another inside the nævus, as in that case all action would be arrested. The strength needed varies from five milliamperes upwards for each needle.

The test for the completion of the operation is, in the case of the subcutaneous nævi, hardness of the mass. As soon as this condition is reached the current should be reversed for a few seconds, then gradually shut off, and the needle withdrawn. The strength of the current must be reduced before it is reversed in order to avoid any sudden shock. When your object is the destruction of the skin you can judge easily enough when to stop by the change in colour. A coat of collodion should be applied after the needle is withdrawn. Do not select facial nævi for your first experiments. Through small errors, or accidents, or lack of experience, you may manage to finish with a contracted cicatrix, which, occurring on the covered parts, would be of little importance, but on the skin of the face might lead to a deformity greater than that you endeavoured to remove. Warts and moles may be easily destroyed by the action of the negative pole. They are replaced by small scars—often so small as to escape notice.

The easiest application of electrolysis is for the removal of large stray hairs from the bodies of those persons who may regard them as disfigurements. Each hair must be treated separately. Place a large moistened positive electrode on the skin, a few inches from the hair, then pass the needle, attached to the negative pole, carefully alongside of the hair right down to the bulb, gently holding the hair with a pair of forceps, in order the more clearly to show the track along which the needle is to be passed. On no account should the hair be forcibly withdrawn. Then turn on the current, using one to three milliamperes. In a few seconds you will find that the hair is loose, and that it simply requires to be lifted from its place. The bulb is destroyed—the hair cannot return—no scarring results. This method is of doubtful service in those cases where the hair is abundant or fine, or when it has appeared after puberty, as it seems occasionally to stimulate the growth of neighbouring hair-bulbs.

To return for a moment to the general subject we are discussing this afternoon, I would strongly advise you, whenever it may be possible, to superintend the electrical treatment yourself. When this is out of the question, and it often is, do not rest satisfied when you have given explicit directions to the patient's friends. In the first place, write them down, and in the second, be present on at least one occasion while the treatment is being carried out. A distinguished physician recommended galvanism in a case of peripheral facial paralysis. He gave what most of us would consider to be explicit directions for the use of the battery, which was brought to, and approved of, by him; and yet for two

years the friends patiently galvanised the wrong side of the face.

Here I must conclude. My object has been to lay before you the methods adopted by those who have worked most thoroughly at the subject. Simple, though numerous, as the directions I have given you may be, it yet remains true, as well in the medical as in the surgical parts of electrotherapeutics, that experience alone can give you that knowledge which is essential to success. It is so in the use of drugs and of dietaries. It is so in all surgery. If, therefore, your first attempts have not been so successful as I may have led you to suppose they should have been, remember that it may not be wholly the fault of the agent you have employed. Electricity is no universal specific. Often it fails where we should most expect it to succeed. I believe that you will find it a useful member of your therapeutic measures; of less use than some, but of more use than many of the numerous constituents of that heterogeneous assemblage.

ON THE TREATMENT OF OBSTRUCTIVE DYSMENORRHOEA AND STERILITY.¹

By THOS. MORE MADDEN, M.D., F.R.C.S.E.,

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THE treatment of sterility and obstructive dysmenorrhœa are closely interwoven questions of great practical interest, which, up to the present time have not been referred to in the *Transactions* of the Royal Academy of Medicine. Hence, although I have elsewhere considered certain aspects of these subjects, I now venture to submit my views thereon, some of which I believe will be found novel to this Academy, in the hope of inducing a discussion on one of the most frequent, and oftentimes the most difficult, of the daily-recurring problems that come under gynæcological attention.

In so doing I would premise that it appears to me in the recognition of obstruction, from either cervical or fallopian stenosis, as the chief cause of sterility, as well as of dysmenorrhœa, will be found the key to the pathology and successful treatment of the great majority of cases of both these morbid conditions. These, as already observed, being intimately connected in their pathology and treatment, must be here dealt with in conjunction, although with special reference to the former. The frequency of such cases is much greater than is generally admitted, as in my hospital practice, during the past eleven years, upwards of eight hundred instances of obstructive dysmenorrhœa, or of sterility, similarly caused, have come under observation in a total of seven thousand gynæcological cases that have been there noted in our intern and extern departments. Nor is the pathological importance of these complaints less striking than their frequency. Thus, of all the ailments of female existence, few give rise to greater and more persistent suffering, or produce more disastrous effects, not only on the general physical health, but also on the cerebro-nervous system, and on the moral constitution of the patient, than result from well-marked obstructive dysmenorrhœa. The importance of the last-mentioned consequence of dysmenorrhœa, to which I directed special

¹ Read before the Royal Academy of Medicine of Ireland,

attention in an article of mine on the "Disorders of the Female Sexual Functions," in *Quain's Dictionary of Medicine*, is by no means as generally recognised as it should be. This is more especially evident in many cases of alcoholism, and I may repeat that a morbid craving for alcohol in women may very frequently be dated from their first painful menstrual period, when stimulants are too often forced by foolish mothers into the generally reluctant lips of their daughters. Once, however, the pain of dysmenorrhœa has been thus relieved, the girl at the next epoch of suffering naturally, and not unwillingly, seeks similar solace, until finally the victim of dysmenorrhœal alcoholism becomes an habitual, and, perhaps, an incurable drunkard.

Importance of the Study of Sterility.—The effects of the second of the morbid conditions that form the subject of this communication are certainly of no less moment in a practical aspect than are those results to which I have just referred, as consequent on the first-named ailment—the latter involving not only the physical health and well-being of our patients, but also, in too many instances, intimately affecting their social interests, and the happiness of conjugal life. In this country at least, the infamous doctrines of the modern votaries of "*Venus sine Lucilla*" have, fortunately, to no appreciable extent displaced the Christian view of the main function and chief end of woman's married life. Hence, in Ireland to the present time, as in Israel in the days of Sarah, to be childless is commonly regarded as a reproach to a married woman, and as a subject of marital disappointment and trouble.

Causes of Barrenness.—As in every other morbid condition, so in the treatment of sterility—our first aim must be to ascertain, and our second to remove, if it be removable, the cause of the trouble for which we are consulted. Of the various causes of barrenness, some—as, for instance, the absence or arrested development of the organs essential for conception—viz., the uterus, fallopian tubes, or ovaria, being beyond remedial reach, need not here occupy our consideration. In the great majority of instances, however, sterility, occurring in women within the limits of ovarian functional vitality, admits of effectual treatment, when that treatment is rationally directed to the special exigencies of each case.

By most authorities on the subject, including even the late Dr. Marion Sims, female sterility, or reproductive inability, has been confounded with impotency, or sexual incapacity. Hence, it may not appear superfluous to remind my hearers that, properly speaking, the latter term should be restricted to those cases in which marital intercourse is prevented by some physical impediment or malformation in the female genital tract—such as vaginal or vulval occlusion, imperforate hymen, vaginismus, cervical stenosis, etc., by which impregnation may be precluded, whilst sterility or imperfection of conceptive power is due to either some structural lesion, deficiency, displacement, or flexion of some one of the organs essential to conception. Thus, the uterus, fallopian tubes, or ovaria, may each be absent, misplaced, or otherwise abnormal, or else these parts, being in a normal condition, the patient nevertheless remains sterile, either from constitutional causes or from other causes—such as sexual irrespondence or incongruity, of a moral rather than of a physical nature.

Stenosis of the Cervical Canal.—This, according to my experience—now extending over a quarter of a century, in hospital and in private consultation, at home and abroad—is not only the most frequent of all the causes of sterility,

but is, moreover, the most amenable to appropriate treatment of all the physical factors in the causation of infecundity. Until a recent period, however, neither the frequency nor the rational treatment of this cause of barrenness were recognised by modern surgeons, although both were clearly pointed out by some of the older writers. Thus, it was not until the late Sir James Simpson recalled attention to the plan of dilating the os uteri and cervical canal by a method which, several years previously, had been suggested by another Edinburgh surgeon—whose ignored suggestion on the use of sponge tents in the treatment of dysmenorrhœa Simpson revived—that anything like adequate attention was drawn to this important subject. But both Simpson and Mackintosh were forestalled in their views by ancient writers, whose names had long been forgotten, and whose works had apparently become hermetically sealed by the hand of time. Hence, as I believe that the history of the steps by which modern gynæcological science has arrived at its present development are well worthy of the consideration of all who pride themselves on being members of a learned and liberal profession, I venture, in this connection, to recapitulate, briefly, a few observations which I made several years since, before a society which no longer exists, on this point.

The credit of suggesting the dilatation of the os uteri and cervical canal by means of sponge tents is, as already said, generally conceded to the late Sir James Simpson, by whom it was claimed, in a paper of his published in the *Edinburgh Journal of Medical Science* for January, 1850, in which he says: "In 1844, in a communication laid before the Medico-Chirurgical Society of Edinburgh, I proposed a means of safely opening up the cavity of the cervix and body of the uterus to such an extent as might enable us to introduce a finger into the uterine cavity for the purpose of diagnosis in the treatment of this (uterine polypi) and other morbid conditions of the organ. The means described consisted in the introduction of sponge tents into the os and cavity of the uterus, so as gradually to dilate these parts to the degree required." This suggestion was then looked on as "marking the commencement of a new era in uterine surgery." It is, therefore, not a little interesting to find that a similar method of dilating the os uteri was well known and described some two centuries and a half ago. Thus, in "The Method of Physic, containing the Causes, Signs, and Cures of Inward Diseases in Man's Body from the Head to the Foot," by Philip Barrough, and "most humbly dedicated by the author to his singular good lord and master, Lord Burghley," the eighth edition of which was published in 1639, the writer, speaking of the treatment of contraction of the cervical canal and os uteri giving rise to mechanical dysmenorrhœa, and producing sterility, etc., in the chapter entitled "Of Straightness of the Matrice," says: "And when the places do seem to be softer to the feeling, then you must put a dry sponge, that hath a cord hanged at it, into the straight place, to the intent to make it wider, which, if it fall out, you must put in another that is thicker. Therefore, you must have many and sundry dry sponges ready." This ancient gynæcologist next refers to the possibility of these sponge tents producing inflammation in the mouth or neck of the matrice, and discusses its treatment, after which he continues: "When the inflammation is ceased, and the place is open, annoint upon a sponge or cerot made of oil of roses and goose grease, and use it untill it be healed, making the place a little sounder; but yet you must alwaies put in sponges untill

the end of the cure, lest that the mouth of the womb do gather together againe."

This coincidence does not extract from the merit of Sir James Simpson, to whom suffering humanity, as well as medical science, owes so much on other scores, as one of the first modern gynæcologists to make a practical application of tents in the treatment of a condition then commonly regarded as beyond the reach of curative treatment. I may, however, take this opportunity of observing that the number of such coincidences between long-forgotten ideas and so-called modern medical discoveries is far greater than could be readily credited by those who share in that illiterate neglect of the lessons to be gathered from the experience of the past, as embodied in the works of the older medical writers, and in that ignorant contempt for their opinions and observations which is, unfortunately, too prevalent at the present day.

It is not my purpose here to refer in detail to the successive improvements which have since been effected in the methods of carrying out the gradual dilatation of the cervical canal, the most important of which were due to the late Dr. Sloan, who introduced the use of laminaria tents as a substitute for the old-fashioned and now, happily, generally disused fœtid and inefficient sponge tents; and to Dr. Kidd, who improved on Dr. Sloan's idea by the employment of a number of laminaria bougies to secure a comparatively more rapid and complete expansion. Fortunately, we have now passed beyond the period of gynæcological practice in which these slow, painful, and often hazardous plans of cervical dilatation were the only methods available. No greater improvement has occurred in our branch of surgery than the replacement of these oftentimes unsatisfactory procedures by the more effective means now at our disposal for the rapid expansion of this canal. Of these, perhaps, the best known and most generally employed in this country are either Hegar's or Lawson Tait's dilators. I now desire to call your attention to another instrument which I have designed for the same purpose, and which, I venture to hope, may be found by others, as it has by myself, more satisfactory in its use in the treatment of dysmenorrhœa and sterility occasioned by stenosis.

This instrument will, I believe, be found to supply a want long recognised by gynæcologists—namely, that of a reliable and effective means of securing the rapid and permanent dilatation of the cervical canal in the treatment of stenosis giving rise to the morbid conditions now under consideration. The principles on which it is constructed differ from that of other dilators in several respects, and above all, in one which I consider most important—viz., in producing expansion of the canal from within, outwards—in other words, in imitating the natural process of expansion from the uterine cavity downwards to the os uteri; whereas other dilators, such as Hegar's etc., act in the opposite direction. In my own hands the utility of this instrument, the expansion effected by which may be determined and accurately measured by the affixed index, has been fully tested in a large number of cases of sterility and dysmenorrhœa in hospital and private practice. I may add that the instrument, which does not occupy more room than the ordinary sound when introduced, may also be used with advantage for the dilatation of the female urethra in many cases in which this procedure is indicated. This instrument has been carefully made in accordance with my directions by Messrs. Arnold and Sons, West Smithfield, London.

(To be continued.)

Special Articles.

HEALTH RESORTS OF THE WORLD.

XVIII.—BOURNEMOUTH.¹

By REV. R. AUGUSTINE CHUDLEIGH,

LATE OF CHRIST'S COLLEGE, CANTAB., RECTOR OF WEST PARLEY, WIMBORNE.

BOURNEMOUTH has been said to have the mildest climate and the fiercest population of all the southern coast. That is not true. The climate is not so mild as that of Penzance or Falmouth, and the ferocity of its inhabitants has been considerably over-stated. Geologists assure us that the antecedents of Bournemouth were undeniably warm, and the meteorologists declare that its present climate maintains as much as can be expected of its ancient high-temperature traditions; for the tale of the strata below is of palms and great ferns, and creatures that love warm mud. The topmost stratum which at present overlies the rest consists of a busy mass of human drift which forty years of fashion's tide has been depositing around the mouth of that tiny burn which here struggles through the sand to the sea. It is said—but it is probably a malicious libel—that this burn-mouth was at one time an earthenware drain-pipe (and not very many inches in diameter), but at present the stream disappears into the earth on the landward side of the Pier-road. Whither it goes, or where it reappears, let no one be so profane as to enquire. That stratum of humanity, like the strata beneath its feet, is worth a little study. Its characteristic is diversity.

Bournemouth seems the chosen home of every class and every creed. Under its salubrious skies one sees the survival of the fittest, and the least fit, side by side. Gallant officers of both services—retired, of course—dyspeptic and pale clergymen, returned Indians, with hepatic troubles writ large on their sun-dried faces, seem to find life more tolerable here than elsewhere. *Omne quod exit* in 'ism, and *omne quod exit* in 'opathy can manage to exist. All the religions and all the diseases have their temples here, so that the sick in body and the sick in soul can enjoy unhindered their favourite cure. If these be somewhat combustible materials, and if, under the inflammatory influences of politics, religion, and temperance, they do occasionally catch fire, there is, of course, an opportunity for a little chaff about "ferocious populations." Yet, for all that, there are few places where religion is more real, or property more safe, where the Churches are more beautiful, or the congregations more earnest, than at the so-called "Hampshire Torquay." Why that name was given to Bournemouth is possibly known to those who gave it. The two places are not alike. The character of its fences is often a clue to the general character of a place. Now, Torquay abounds in limestone, and a mere boundary wall will often make one stop and admire it as an example of good and solid masonry. Bournemouth, on the contrary, is badly off for stone, but abounds in sands, mostly silicious; and the crumbling fences of sandy turf generally strike the new-comer as one of the peculiarities of Bournemouth. Perhaps it is not too much to say that the chief interest and importance of the locality (*absit omen*) is founded upon its sand. The dryness of its soil, the salubrity of its air, the interest of its geology, the peculiarity of its scenery, its flora, and that famous children's playground—its miles of soft beach, cannot be explained or

¹ In this series have already been included:—Florida, Santa Barbara, Spa, vol. iii., 1884; Bath, Tunbridge Wells, Monterey, Harrogate, Buxton, Leamington, vol. iv., 1885; The Mont Doré of Bournemouth, Matlock Bath, Malvern, Dax, Southport, vol. v., 1886; Hastings, Scarborough, Health Resorts of Scotland, vol. vi., 1887.

described without using the word sand with exceeding frequency.

Bournemouth lies in the Hampshire Basin, the westernmost of the three great eocene depressions which contain between them the best geology and the largest cities in the whole world. If one alights at the East Station and walks straight out to the East Cliff, the idea suggests itself that one is at the broken edge of a huge basin—that a large fragment has been broken off, or cracked out and washed away. At one's feet is a loose sandy cliff, the face of which is perpetually slipping and sliding downwards to the sea. It is not like the cliffs at the Land's End, which look as if they have never altered since Creation's dawn, and will remain unchanged till the final doom. It is not like the slates and schists of the Newquay coast, which look as if they were broken off fresh last night, and will lose their freshness by to-morrow morning. The Bournemouth cliffs more resemble a railway cutting, or rather, an embankment, not made *quite* recently, but channelled and gullied by a few years of frost and rain. What mean all these water-worn pebbles and sea-borne sands, and whence did they come? The geologist replies. And did he not give good reasons for his strange answer, we would not for one moment believe him. He declares that we are right upon the spot where the grandest of ancient rivers met the warm primæval sea. He tells of a vast continent which once stretched in continuous line across the Atlantic Ocean, though now Greenland, Iceland, the islands around Scotland, and the granite hills of Cornwall, are the only portions left above the waves. He tells us that the memory of this great continent still lives, not only in the traditions of Atlantis, and the Hesperides, but that certain migratory birds still select a line of flight which coincides with the ancient coast-line, as if impelled by transmitted habit to attempt an oceanic flight which grew gradually longer as the vanished continent sank beneath the waves. In consequence of this great barrier, the cold Arctic current could never chill the southern seas; while, on the other hand, the great Atlantic current would be curled round far more than now, and would pour its warm waters right into the estuary of the river which flowed down eastward from the Atlantis continent, with the result that just where Bournemouth now lies, there would be deposited vast beds of shingle, sand, gravel, and clay, in which would be mingled the fauna and flora of a continent and an ocean, of a fresh water river and a salt sea. Time would fail to tell of the ice age which followed, or of the great chalk barrier which in (comparatively) recent times joined the chalk of the Needles with the corresponding formation in Purbeck, near Swanage, just across the bay. How the sea and the land-springs combine to erode the cliff—the land-springs by forming an undercliff, as at Ventnor, the sea by promptly washing that undercliff away; how full five miles of land has thus been removed, and is being removed still—all this should be learnt on the spot by those who seek health, and health will assuredly be found in this process of seeking.

And Bournemouth has charms for others than the geologist. The botanist has a chance of finding many a prize. *Simethis bicolor*, found nowhere else in England, was found at Bournemouth so lately as 1855. And though an organised search revealed only "semi-detached villa residences" (eligible, of course) on the home where *simethis* grew, yet it is whispered that some know its retreat in Branksome Woods even now, and they don't mean to tell—and they are quite right, too. It is also said that *Diotis maritima* is occasionally seen on the tongue of land between the Avon and the Stour. *Carduus marianus* is within reach; at least,

there is a field where it regularly appears once every four years. It is the rotation of farm-crops which, by giving it a chance of growing, effects this periodicity. We know a bed, scarcely larger than a table-cloth, where *Cicendia filiformis* grows so thick that we once enclosed twenty-five flowers in one pinch of the finger and thumb. We found also a plant of *Centaurea solstitialis* with about three hundred buds on it, of which only four expanded, as it had to be transplanted to save it from the scythe.

Then there is Wimborne Minster and the Priory Church at Christ Church; there is the New Forest and Corfe Castle; there are the accumulated delights, on the earth and in it, of ten centuries and (say) ten billion years. The pier, the gardens, the clubs, and the trains, leave little to be desired. There are books published about Bournemouth as a health resort; and, like the place itself, they are "quite healthy and very dry;" but they tell one the analysis of the water, worked out to three places of decimals, and the curves of temperature accurate to the tenth of a degree. They tell for what diseases Bournemouth is indicated and contra-indicated, and much else which is useful to know, which is not found in this article; for this article strives to describe, not Bournemouth in a book, but Bournemouth out of book—how she felt, and looked, and pleased, as one roamed through her pines, was blown about by her breezes, got her sand in one's eyes, and personally made her acquaintance.

THE ETHICS OF PROVIDENT DISPENSARIES.

BY A. W. WALLACE, M.D.

It is the fundamental error of Socialism, that every individual claims a right upon the State for food, clothing, shelter, and medicine, and it is the condemnation of our Poor-law system that it has recognised this claim. The law is an universal one, that if anyone will not work, neither shall he eat. It rules in all its rigour in the lower creation. When autumn comes the drones in the bee-hive are ruthlessly thrust out, their wings bitten off, and they are left to die. Every creature must find for itself, and if it ceases to do so the penalty is death. It is a law most rigid in its application. It makes no exception on behalf of the weak, the aged, or the maimed. It says, Work or die. The human race is no exception to the operation of this law. There also it holds good—"work or die." Modern legislators have thought that they could reverse this law, and therefore they have enacted that men shall be fed, although they do not work. The consequence of this enactment is that, in order to prevent the State becoming bankrupt, it has become necessary to make poverty penal, so that, as Sydney Smith said, England is the only country where poverty is a crime. The penalty most usually enforced is that of imprisonment in a workhouse; but besides that, bullying and insult are largely used to lead to the provision made by the State being taken advantage of by as few as possible. The result of this has been the continuous demoralization of multitudes of people. The cause of all this has been that legislators have never understood that the operation of a natural law can never be successfully opposed. If in any case it acts injuriously the mischief can only be prevented by the operation of a higher law, which shall supersede the action of the lower. In the present case the law of kindness is the only one which can suspend the operation of the other. But "the quality of mercy is not strained." It cannot be administered by the State. It must be spontaneous. It must come as the free-will offering of cheerful givers. Sound wisdom must come

in to regulate the distribution of the streams, but only kindness can supply them. This must be the foundation principle on which both hospital and dispensary relief must be administered.

We pass now to the consideration of the practical rules which should regulate dispensaries, and shall take as our text a letter recently received from a medical officer of one which is considered a model. Our correspondent says: "That we do not get anything like proper remuneration for our work is plain enough; we however get rather better paid by it than from friendly societies, and there are two or three practitioners who have clubs at even lower rates than we get. One thing I have noticed—that some of my own private patients, who could and did pay a reasonable account, at once joined the dispensary. Of course I was a loser thereby. I have made a rough guess, and estimate that I get at the rate of ninepence for each visit; but then I have no dispensing or book-keeping for them, and all messages must be sent me before nine a.m., except in cases of accident or sudden illness. A good many of these cases are from among those who never would pay a doctor. It is a commercial transaction between the staff and the members. We work and they pay (though inadequately); but, as you say, the healthiest pay most in proportion. The same holds good in friendly societies. We could not go on at a profit here did the infirmary not allow us £500 a year for doing their outside work. As far as the members are concerned it is mutual help. Another evil I find is this, that as patients have not to pay for their medicine, many of them contract a mania for swallowing it. One patient I had never missed a month for four years in taking medicine, though she ailed nothing. We also have a long list of chronic cases and incurables." 1. It is evident that the entrance to provident dispensaries must be most carefully guarded, and for this purpose we would suggest a committee, composed of equal numbers of medical men, workmen's delegates, and representatives of subscribers. 2. There is a most important distinction between cases of severe and trivial illness which has never yet been recognised in its true financial bearing. Trivial cases are a large source of profit to the general practitioner, but they are the bane of dispensaries and of the out-door department of hospitals. For one case of severe disease, incapacitating a patient for work and demanding medical advice at his home, there are scores of cases where the patient can work all day and come in the evening for advice at a medical practitioner's surgery, paying 1s. 6d. for advice and medicine without any difficulty. Any arrangement by which general practitioners are deprived of these cases should be most vigorously opposed. On the other hand the care of a patient during a long illness, withdrawing him from work and requiring his being visited at home, does not pay the practitioner. We would therefore suggest for consideration whether a better-paid class of artisans might not be admitted to provident dispensaries for attendance during severe illness and at their own houses only; and that in slight illnesses they should pay for their advice and medicine in the usual way. 3. As the payments made by members cannot provide adequate remuneration to the medical staff, it is manifest that subscriptions must come from well-to-do people. In the general management of the dispensary as well as in the admission of members it appears to us that the three classes, the general subscribers, the working men, and the medical staff ought to be represented. 4. There ought to be provision made for dealing with chronic and

incurable cases and inveterate medicine swallows. The latter might be dealt with summarily by the committee submitting their case to two of the staff, and if found to be taking medicine without sufficient reason they could be removed from the list. The chronics and incurables might similarly be limited to a certain number of visits per month. 5. Provident dispensaries ought to be made a means of instructing the people in the laws of health. A system of district nursing ought to be in operation in connection with them, and lady visitors ought to assist in spreading a knowledge of the proper management of young children, and other matters of which the working classes are sadly ignorant. The medical staff ought also to do work in preventive medicine, and be *paid for it*. The only way to meet the downward tendency of medical remuneration is to get the working classes persuaded that cheap doctoring means, as a rule, bad doctoring. At present the working classes, and we fancy a great many of the non-working classes as well, swallow medicine as they would use a charm. They need to be educated. But when a great medical corporation declares that its members shall not instruct the public in the principles on which sound treatment is based through the press, it seems as if we must wait for better times, till the coming of the Coqigruers, or later.

Clinical Cases.

LEICESTER INFIRMARY.

A CASE OF TRACHEOTOMY.

By J. B. OKELL, M.R.C.S., L.R.C.P. (HOUSE SURGEON).

J. E. P.—, male, æt. thirty-four, was admitted on October 28th, 1887, at 7-45 p.m., suffering apparently from a slight difficulty in breathing. At 7-45 p.m., being summoned hurriedly to the ward, found him pulseless, and not breathing; so seizing a knife the trachea was at once opened, and a large silver tube inserted, which was held in place whilst artificial respiration was resorted to; after ten minutes he made his first gasp, so a hypodermic injection of ether (℥xv.) into his forearm, and an injection of brandy into rectum, were given. These had the desired effect, his breathing and pulse soon becoming very much better, consciousness however not returning until 1.30 a.m., being five and a half hours after the operation. In the after-treatment there was nothing noteworthy, as he went on well, making a good recovery, but always wearing a tube. His throat was examined about a week after operation, when he was found to be suffering from advanced tubercular laryngitis; but nothing abnormal could be made out in chest, his temperature being generally sub-normal, no cough, no sweating at nights; his slight expectoration on two or three occasions were carefully stained for tubercle bacilli, but none found. After nearly three weeks in bed he was allowed up, when he rapidly gained flesh. As he could not be taken into a convalescent home, he was detained here until January 24th, 1888, when he was discharged, still wearing his tube, which had been changed to a vulcanite one, being able to speak very distinctly. His throat was again examined, shortly before his discharge, when the disease was found to be stationary. I might add that he altogether denied having had syphilis, but anti-syphilitic treatment was tried without any appreciable change, for two months.

Remarks.—This case shows what can be done, even in apparently hopeless ones, by prolonged artificial respiration

and hypodermic injections of ether. I would call particular attention to the latter, as it caused almost instantly a revival of the pulse; and further, to the great benefit derived from constantly wearing the tube—firstly, as regards his voice, which had been in a whisper for over twelve months, but now being able to be heard some distance off; secondly, as to his bodily health, he now being able to do his work well, whereas before he had great difficulty in following his employment.

Reviews.

Notes on Surgery for Nurses. By JOSEPH BELL, F.R.C.S. Edinburgh: Oliver & Boyd.

It is often remarked that a good sermon to children is of more benefit to the adults present than the sermons addressed to themselves. On the same principle, medical practitioners may profit more by Mr. Bell's Notes for Nurses than by more pretentious treatises addressed to themselves. Anyway his papers are pleasant reading, and we nearly finished the book at a sitting, which is more than we can say for the majority of books we review. It is wonderful when all theories, and explanations, and controversies, and personalities, and claims to priority of discovery, are excluded from the pages of a book, how much may be put into 130 of them, especially when their contents are intended to recall the lessons that have been learned through the eye and hand at the bedside. Mr. Bell's book covers 132 small octavo pages, and the print is good; and yet the nurse who has mastered its teaching, not as cram but at the bedside, has got an amount of surgical knowledge which may enable her to relieve an untold amount of human suffering. In our opinion, high-class nursing is far more truly woman's vocation than ordinary medical practice, the more so that the surgeon is so rapidly invading the domain of the physician. Pott tells in his *Surgery* how in a case of fracture of the skull, with the usual symptoms of "Pott's tumour," the "physical gentleman," who was in attendance, objected to any interference, but the "physical gentlemen," now-a-days, are only too glad to have the cavities of the body which have hitherto been their exclusive preserves, explored, washed out, and otherwise interfered with by the surgeon. It is evident that in the immediate future there will be a demand for men in the profession considerably above the level of the ordinary medical practitioners. If the profession consisted of more highly educated men, and fewer of them, and if the public were once taught that, in the great majority of cases, good nursing is of more avail than swallowing physic, the result would be, that in place of the practitioner being a mere medicine vendor, selling his straw as a means of getting paid for his expenditure of time, he would be the superintendent and adviser in reference to the nursing arrangements; his visits would be less frequently required; he would be better remunerated for them, and he would have the knowledge and skill requisite for the performance of all the operations for preserving life which advanced surgery has introduced. But these reforms can never come from within the profession. They will only be the response to the demand of an educated public for something better than the present condition of things. We learn from Mr. Bell's book that he has laid aside the spray after many years careful trial of it, and now uses irrigation during dressing with a one-tenth per cent. solution of bichloride of mercury. It is curious that he does not

mention what mode of dressing he employs. One word in conclusion as to style. The author should make it more purely Saxon. We tested a very intelligent nurse with the *q.v.*, which he often uses, and she had no idea what it meant. A great many words from the Latin and Greek ought to be replaced by their Saxon equivalents. A. W. WALLACE.

The Diseases of the Ear, and their Treatment. By ARTHUR HARTMANN, M.D., Berlin. Translated from the third German edition, by JAMES ERSKINE, M.A., M.B.

THE frequency with which text-books on Diseases of the Ear, "for the use of students and general practitioners," have of late appeared, is a sign on the one hand of the increased interest now taken in this formerly neglected subject, while on the other it may be doubted whether the demand for such works is altogether commensurate with the supply; and we are inclined to think that the desire of the authors to put themselves *en evidence* counts for a good deal in the production of many volumes of this description. Be that as it may, the work before us will, we think, bear favourable comparison with most of its predecessors, and the author and translator are to be congratulated on the production of a very readable volume, which contains most of what the general practitioner needs to know on the subject of the ear. The book commences with an interesting historical sketch of the progress made in aural surgery from the time of Hippocrates to our own day, and the second chapter is devoted to the diagnosis of the various affections of the ear, as well as to the different methods of testing the hearing. It is to be regretted that rhinoscopy receives no attention at the hands of the author, for no book on the diseases of the ear is now complete without a description of this important method of diagnosis. The anatomical descriptions are necessarily somewhat meagre, and might possibly have been omitted altogether with advantage from a practical work of this kind, for, probably, few students will have recourse to them for their knowledge of the anatomy of the ear. In the treatment of polypi and granulations the author recommends perchloride of iron, nitrate of silver, and chromic acid. As regards chromic acid, we are glad to be able to corroborate all that the author says of its value, and we have never seen "severe inflammation produced by touching the surrounding healthy parts." In fact, we have found this agent so satisfactory that we have discarded all other caustics for the destruction of neoplasms, and with boric acid for the subsequent treatment of the purulent discharge, the terrors of a "running ear" have, to a very large extent, been removed. The illustrations and type are unusually clear and intelligible, and we can recommend the work as a reliable guide to the diseases of the ear.

RICHARD WILLIAMS.

Practical Manual of Diseases of Women and Therapeutics, for Students and Practitioners. By H. MACNAUGHTON JONES, M.D., M.Ch., etc. Third edition. London: Baillière, Tindall & Cox.

THIS work has followed the general law of evolution; the new edition bears only a general resemblance to the first one; it is enlarged and developed in those parts wherein most progress has been made, and it is now fully abreast with modern gynæcology. The second edition was admitted to be an improvement on the first; fortunately, the second edition was soon exhausted, and the third edition had to be prepared. Dr. Macnaughton Jones has evidently taken up the work of revision in this third edition with energy, and,

we might say as a labour of love: the result must be satisfactory to reader, author, and publisher. The great aim of the author has been to make the work practical and useful, and we can especially recommend the treatment suggested, for after all this is of paramount importance. In many works of this kind there is a hopelessness as to therapeutical indications, remedies are either ignored, or surgical aid is too readily invited. The judicious advice given will guide the practitioner in many a perplexing case. We thoroughly agree with the author that the practitioner who desires to practise his profession intelligently, ought to be able to make up his own mind, and to be able to give his patient his best advice, even though not a specialist. But no one can practise his profession at the present day with any degree of honesty, unless he is posted up in the lines of modern advance; hence the necessity for a manual of this nature. The work is well written, clear, and free from padding, and as it is profusely illustrated, we know of no book so suited to the modern requirements of the general practitioner.

Diseases of the Breast. By THOMAS BRYANT, F.R.C.S.
London: Messrs. Cassell & Company.

OF this addition to Messrs. Cassell's series of Clinical Manuals, it is only possible to speak in terms of the highest praise. From the distinguished position the author holds, his experience has necessarily been most extensive, and the whole literature of the subject has been consulted and condensed in this compact volume, bringing it well up to date (1887). The work consists of about 350 pages, and is illustrated with eight instructive and beautifully executed chromo-lithographs. The subjects for these chromos are well selected, representing, not types of rare diseases (except plate viii.), but affections and symptoms more commonly met with by the practitioner, such as "Submammary abscess," "Adeno-fibroma," "Cystic disease," "Dimpling and puckering of the skin in Carcinoma," etc. Plate viii. represents two rare forms of breast diseases—viz., "Chondroma" and "Hydatids." In all these plates the artist is peculiarly fortunate in the colouring. In the preface the author sets forth the object of his book as "a clinical exposition of the abnormalities and diseases of the breast, more particularly with reference to their diagnosis and treatment." An acquaintance with the microscopic, and macroscopic appearances of breast tumours is assumed, but the latter is fortunately not carried out, and much valuable information is given as to the naked eye appearances of the tumours on section. The work is lavishly supplied with cases; indeed the reader may be tempted to think too lavishly, but in a complete monograph of a subject this obviously cannot be helped, and on careful perusal it will be found that each case tends either to simplify a subject, or to emphasize the importance of a symptom. The first chapter is devoted to the anatomy of the breast, special attention being drawn to the suspensory ligaments, of which an excellent representation is found on the frontispiece. The second chapter deals with the "abnormalities of the nipple and breast," and is a concise *resumé* of all that is known of the subject. Speaking of hypertrophy of the mamma, many facts are brought forward throwing doubt on the accuracy of the general opinion that "increased function and therefore increased nutrition" are its chief cause. One of the best chapters in the book is that on chronic abscess, and the series (13) of illustrative cases in it well repay study. On the method of examination of the breast, the author's remarks are neither so full nor so clear as could be desired. Why too are they not assigned an earlier place? Thus chronic abscess often presents

great difficulties in diagnosis, yet this affection has been disposed of before the surgical student has been told how to examine the breast. As regards the method of examination, the inference to be drawn is that the practitioner or student should stand *in front* of the patient, and use *one* hand, a method not nearly so good as standing behind the patient and using both hands; thus: in examining the left breast, the right arm should be passed over the patient's right shoulder, and the left under her left arm, the palm of each hand being thus easily placed on the breast. The rare diseases of scrofulous and syphilitic mastitis have each a chapter devoted to them. Carcinoma is exhaustively treated in over one hundred pages. A wise suggestion is made that the term "encephaloid variety of carcinoma" should be abolished, as the disease is of extreme rarity, an error constantly arising between it and sarcoma. Whenever possible the statistics of cancer are gathered into a tabular form, and instructive tables are given of "Influence of Age" (analysis of 600 cases); "Duration of Disease when first seen"; "Duration of life in those operated upon" and "In those unoperated upon"; "Local recurrence after operation"; "Metastatic deposits," etc. On the much debated question of the removal of the axillary glands in every operation, as advocated by Mr. Mitchell Banks and Mr. Pearce Gould, the author lays down the following law: "The rule of practice ought, however, to be axillary exploration in the majority of cases of excision of the mamma for cancer, the omission of the practice, the exception." He thus allows himself a discretionary power, and evidently leans towards the older method of treatment; for a little later we find this warning: "The practice of exploring an axilla as a measure of routine, should not be followed, since it is without doubt a graver method to the patient, and the advantage which it in theory possesses is not yet proved." The opinion that "simple" cysts of the breast, if untreated, may give rise to solid growths and grave breast disease, is not one that will find favour with all surgeons. The writing is clear and pleasant, although the introduction of a word like "diagnostication," where "diagnosis" would serve equally well, is to be deprecated. The work may be confidently recommended both to student and practitioner, and will be found to well maintain the wide reputation of its author.

ARTHUR H. WILSON.

Short Notices.

The Scientific Enquirer and Journal of Microscopy.

AMONG our Short Notices in the January number of the *Provincial Medical Journal* we regretted to state that Mr. Alfred Allen, owing to the state of his health, had felt compelled to discontinue the issue of the *Scientific Enquirer*. This announcement, we have now the gratification to inform our readers, may be withdrawn. It had been received with so much regret, that the editor, who has met with many expressions of sympathy, and offers of literary aid, has determined to resume the publication of that useful periodical, with the skilful management, as publishers, of Messrs. Baillière, Tindall, and Cox.

We should add that the *Journal of Microscopy* commenced a new series on January 1st. The editor, Mr. Alfred Allen, relieved of the cares and details of publication, will be enabled to bring to the new series of the journal renewed energy, and the force of his long experience, in the direction of the Postal Microscopical Society from its first establishment.

W. B. K.

The Provincial Medical Journal,

APRIL, 1888.

THE French medical societies have of late taken up with considerable energy the much varied subject of the regulation of prostitution. The Société de Médecine Pratique has passed the following resolutions: 1. To create multiple dispensaries for venereal diseases, and to facilitate the means of treatment among the necessitous. Women to obtain, on request, cartes as to their state of health. 2. To suppress arbitrary imprisonment and obligatory visits. 3. To maintain liberty in the public streets by legal means.

At the Academy of Medicine, M. FOURNIER, who has been acting with a commission, has been vigorously defending some of the regulations now in force in France, though he is opposed to the present system of treating diseased women as prisoners. M. FOURNIER and many others who agree with him suggest more rigorous measures against solicitation in the public streets; at the same time they would relax the discipline in force at St. Lazare. M. BROUARDEL has pointed out at one of the debates that it would be extremely difficult to prove solicitation, and he asks How can it be defined, and Where does it commence, because it may even be conveyed by a glance of the eye? If arrests were numerous, only even twenty per day, it would require a special judge to try these cases; and even with a special judge there would be a difficulty, because witnesses would not care to appear. At the present time, in France, there is the utmost diversity of opinion between the most competent judges on the value of State regulation. In the *Journal de Médecine de Paris*, March 11th, M. A. MALECOT has an exhaustive article on "Venereans and the Common Law," and he thus sums up his conclusions: "We must aim," he says, "at diminishing the evil. It is caused by poverty, passion—by civilization itself. The remedy is to be found in the amelioration of misery, the moral training and protection of young girls, in the creation of refuges for unfortunate women, in facilities for work, and in education which shall develop a taste for family life. Such are the measures which legislators and philanthropists should employ. The duty of medical men consists in preventing the development of contagious disease. This is to be done by the popularization of measures of hygiene, by the care of the patients, and by the perfection of therapeutics. Those afflicted will submit voluntarily to treatment when there is no fear of imprisonment. By the multiplication of dispensaries, by opening the hospitals, by free advice, patients will be brought under treatment who would otherwise escape under a more rigorous *regime*." M. MALECOT says that he agrees with such men as STUART MILL, JULES SIMON, DUPONLOUP, PEPRESSENSE, DE LAVELEYE, HERBERT SPENCER, YVES GUYOT, that the violation of individual liberty is directly opposed to the end in view, for if the woman is threatened with sequestration she will avoid the police and continue her life under even more deplorable conditions. He advocates

the restoration of common rights to the women—the police to look after the public thoroughfares. The ideal system would be to isolate all syphilitics, but this is impracticable, because though the women might be arrested, yet the men, who are frequently as guilty, would escape, and they would in turn infect others. This is a most important social question, and so far from becoming simplified by the increasing experiences of centuries, and of different countries it is even becoming more complex. The regulation of vice in our large cities and towns is imperatively demanded, and the state of our streets in England is far from satisfactory. The recent discussion at the Academy of Medicine of Paris does not clear away the difficulties or show us how to effectually grapple with the evil. There is one old way, but it is so old that it will hardly find favour, because it rests upon teaching the authenticity of which will not be admitted. It is the teaching common to all Christians.

IN the last edition of his valuable manual on "Diseases of Women" Dr. MACNAUGHTON JONES says: "Individually, I never use intra-uterine injections. It may be prejudice and a dislike to run the unquestionable risks attendant upon their employment. I believe the less fluid we leave in the uterine cavity after any topical application the better. This applies with double force to the undilated organ. Metritis, peritonitis, collapse, colic, cellulitis, perimetritis, are more likely to follow the injection of fluids." It may not be without profit to compare the view of the English gynaecologist with that held by Americans, and we are enabled to do so as the question was well threshed out at a recent meeting of the New York Academy of Medicine. Some of the leaders in obstetrics and gynaecological medicine took part in the discussion, which was opened by the well-known Dr. PUTMAN-JACOBI. Dr. JACOBI recognised the objections against intra-uterine medication—viz., that they were dangerous, inefficacious, or superfluous, or all three together. She then examined the phenomena following on the use of caustics, to which she confined himself, as the purpose of the method was surgical, and for the removal of diseased tissue. Out of fifty cases under the author's care cure was produced in thirty-nine without accident; in five, accidents occurred, with one death. The conditions were different. Dr. JACOBI pointed out some of the dangers, amongst which none was so important as approximation to the menstrual period. The period of danger began ten days after the close of menstruation. Two applications in one month should not be made until the tolerance of one had been established. At the end of three months it was advisable to suspend the treatment for two months. In the majority of cases it was unsafe to make the application in the office and allow the patient to go, for she should remain in bed for six hours or six days. Intra-uterine medication should be regarded as a surgical operation, and as only one part of a complex treatment for uterine diseases. She had used iodized-phenol, carbolic and nitric acids. Dr. W. GILL WYLIE said he was pleased Dr. MARY PUTMAN-JACOBI spoke of this treatment as a surgical

one. He used intra-uterine medication a good deal, but always after keeping the patient for some time previously under observation for preparatory treatment. He always dilated if the uterus were contracted in the least. He was opposed to strong acids; cases were rare which required anything stronger than carbolic. Intra-uterine medication should never be adopted in acute cases. Dr. S. BARUCH agreed that this was surgical treatment. Four years before he read a paper on "The Therapeutical Significance of the Cervical Follicles," in which he endeavoured to show that all those diseases of the uterus classed under metritis, with or without catarrh, were most successfully treated by healing those follicles. His method was, when the disease was in the cervix, to open with a narrow bistoury and with a sharp curette destroy. He also treated intra-uterine catarrh with the sharp spoon. It seemed to him that thorough curetting was much more in accord with modern surgical ideas than the repeated use of caustics. Dr. P. F. MUNDE said that he thought the tendency was to drop the method. It was a surgical procedure, and dangerous, as might be the introduction of a sound, or even a digital examination, it therefore should be undertaken, with proper precautions, at the house of the patient if possible. There were three main indications for intra-uterine medication. (1) Intra-uterine catarrh extending from cervix to the fundus. (2) Subinvolution or hyperplasia, with or without catarrh, when it was desirable to reduce the size of the uterus, and then to control hæmorrhage. For many years he used milder agents, but he had to give them up. Finding that mild remedies did not answer, he had placed his patients in bed, dilated the canal, if necessary—not much dilatation being required in chronic uterine catarrh—so that the largest uterine applicator with a pledget of cotton would be readily introduced. He curetted with a dull instrument, and then swabbed the entire endometrium with a saturated solution of chloride of zinc, repeated two or three times perhaps, or until no bloody fluid oozed out of the uterine cavity. Then pack the vagina with iodoform or vaseline cotton. Keep the patient in bed two or three days, and apply an ice-bag to the abdomen for the first twenty-four hours. The next application was made at the office, but not within two weeks, and then a solution of one drachm to the ounce was used, or nitrate of silver of the same strength. The subsequent applications were made once a week. For hæmostatic purposes he curetted and then plugged the uterine cavity with cotton saturated with sub-sulphate of iron and glycerine, equal parts, and had never seen any bad results from this treatment. He attached a plug and removed it every twenty-four hours. Dr. CUSHIER said she had employed intra-uterine medication during the last ten years with good results. In dysmenorrhœa, in pelvic pain during the menstrual period, chronic metritis, subinvolution, and where there were reflex symptoms from pelvic disorder not due to either uterine displacement or ovarian disease, she used carbolic acid and iodized-phenol; the applications being made at the house of the patient, never after ten days subsequent to menstruation, and never within ten days

of the next period. In women who had not borne children she never resorted to intra-uterine medication until other means had failed. Dr. MALCOLM McLEAN said he narrowed down the agents to strong carbolic acid, using a ninety-percent. solution. Dr. BOLDT stated that he had been in the habit of making intra-uterine medications up to a few days of the menstrual period without accident; he did not employ strong caustics. Dr. A. F. CURRIER thought it important to keep in mind the fact that there was a great difference in the tolerance of patients, and therefore no fixed rule could be laid down applicable to all cases. He had seldom seen dysmenorrhœa benefited by such applications. In cases of hæmorrhage it was necessary to act at once. He used carbolic acid with iodine and a strong solution of nitrate of silver.

We have given the gist of the views of the various speakers condensed from a report in the *Therapeutical Gazette*. The conclusions we have drawn from a consideration of the report is that though, in the hands of specialists, intra-uterine medication has not been so disastrous as might have been expected, yet it is sufficiently surrounded by dangers, that Dr. MACNAUGHTON JONES' advice is judicious and one to be followed.

MOST of us have been brought up with the impression that lying-in women were specially liable to scarlatina, and were soon affected. This belief has received rude shocks from time to time, though it has never been definitely upset, and perhaps it is not well that it should be. The fear of disease is very often the beginning of wisdom, and it is well that women should have a dread of scarlatina, as it may lead them to take precautions to avoid it. At a meeting of the Obstetrical Society of London, March 7th, the subject came up for discussion through an admirable paper by Dr. BOXALL, a paper bristling with statistics, and bearing evidence of great labour and research. The experience of general practitioners who attend the majority of women in this country will, we think, bear out the statement we made at the meeting—that it would be impossible to practise midwifery if scarlatina were so easily taken by puerperal women, and that the precautions recommended are under existing circumstances impracticable. If general practitioners carried contagion there could not be a doubt as to what our duty would be. We should have to give up attending confinements if we had any scarlatina patients on hand, even though this would dislocate our practice. Change of clothes would not be sufficient unless we possessed princely wardrobes of unlimited proportions. We never could wear the same suit twice, even though we disinfected it—there always would be the possibility of some portion of the contagion remaining. The question settles itself, and we have an answer which defies argument. Speaking after twenty years of general practice, with an ample midwifery experience, and knowing the work done by general practitioners, we can positively state that scarlatina is not given by the practitioner to his patients. We know that numbers of men in busy practice have attended confinements even when

scarlatina epidemics have been present, and women confined during that time have not suffered. The experience of one man, or of one town or neighbourhood, is not sufficient to settle a question of this magnitude; we have much wider experience to guide us, we have but to consult the statistics for the whole country, and follow the scarlatina death curve. If puerperal mortality from scarlatina, septicæmia, and puerperal fever, runs up side by side with scarlatina, then there would be a strong argument in favour of the old view, but we find that the contrary is the case: while the scarlatina curve runs up, the puerperal curve runs on the same way. This fact was emphasized by Dr. MATTHEW DUNCAN when he said: "When scarlatina was killing 250 a week in London, there was no increase of puerperal fever."

Dr. BOXALL's paper opens out a very wide field for further investigation, not only on the communicability of scarlatina to puerperal women, but on the nature of the fevers from which women suffer after confinement. In the whole range of midwifery there is no more moot question than as to the nature of puerperal fever. Of course, we have numerous hypotheses and theories as to its nature, and we are able in certain cases to differentiate. One thing we may by a process of negative reasoning arrive at—viz., that puerperal fever, so-called, is not scarlatina in a disguised form. Of course, it is not to be denied that women do contract scarlatina *post-partum*. We know it by the symptoms, which are definite; but, as we have said, this is comparatively rare in proportion to the number of cases of women who develop a fever accompanied by offensive lochiæ, high temperature, prostration, and lowering of the *vires vite*, etc., a fever without rash or sore throat, or any of the usual accompaniments of scarlatina. It is a plausible theory that this class of case may be a masked form of scarlatina just as erysipelatous puerperal fever does not show well-marked symptoms of erysipelas. Here analogy, we think, is at fault. If puerperal fever be masked scarlatina, admitting the absence of rash and angina, we certainly should expect to meet, in a large number of these cases, with some evidence furnished by the kidneys to establish the relationship. It is remarkable how effectual treatment is in a large number of cases in which we have fever, high temperature, offensive lochiæ, etc. Flushing, with aired water or with some deodorants, appear to clear away local mischief. If scarlatina underlaid the conditions, we are inclined to think that the local injections would not be so beneficial, and it would be like sponging out a forty pound gun to remove a projectile lodged in the breech. We believe that the view of Dr. M. DUNCAN is the sound one, "that scarlatina is one thing, and puerperal fever another," the latter being an entity into which many factors enter.

MR. WELLER, sen., defined a dispensary as a place "where they gives you physic for nothing in your own bottles." There is a depth of humour in these last words. What would DICKENS have said had he heard of a dispensary where it

is alleged that the patients receive drugs made from methylated spirits, and where they have to pay for this precious stuff? We cannot vouch for the accuracy of this statement, but we have before us an account of a meeting of the Leicester Provident Dispensary, in which a charge of this kind is made. The Leicester Provident Dispensary, judging by the report, seems to us to demand a thorough overhauling, in view of the grave charges openly made against the management. This dispensary has long been held up before the profession as a model (?) and owing to its reported great success, institutions have been started in other towns, to the great damage and injury of the medical profession. Provident dispensaries may be written down as failures, though in a few cases they have benefited a few medical men and those officially connected with them. The Leicester Provident Dispensary during 1887 numbered 35,583 members, who contributed, according to Mr. HALLETT, £7,000. To manage this £7,000 and a dispensary, there is a manager who receives a salary of £710 a year. He is not a medical man, or even a chemist, and yet he is, as far as we can gather, responsible for the pharmaceutical portion of the dispensary. The most extraordinary part of the affair is that the members who contribute this respectable sum have no voice in the management of their own institution, and they actually allow subscribers, who give a small sum of £700, absolute power. We have always been under the impression that the working-men of Leicester were distinguished for their intelligence, but our faith is very much shattered by this instance of their trustful nature, and by their want of confidence in their own class. Now, however, they are moved through the exertions of the Rev. A. A. ISAACS, Vicar of Christ Church, we shall expect them to fight this matter out to the end, and secure representation proportionate to taxation. They have indeed a strong champion in the vicar, as he was able to present a memorial in favour of reform, signed by the leading medical men in Leicester, Drs. MARRIOTT, BENFIELD, NEALE, POPE, CLARKE, DENTON, JOHNSTON, MACALEVEY, BRYAN, GREASLEY, BARLOW, BENNETT, DODD, LITHGOW, STEWART, MOORE, DOUGLAS, BOND, SLOANE, COOPER, LANKESTER, CLEMENTS, SNOAD, EMMERSON, and THOMPSON. We feel sure that by perseverance the present Committee will be compelled to yield to the wishes of the members, and institute an independent inquiry. The tactics pursued in London at one of the special hospitals will hardly do for Leicester. The London Board tried to ignore the grave charges made against the secretary and manager, and it would seem that the Committee at Leicester have taken a leaf out of their book. Mr. LABOUCHERE has challenged the London manager, and invited an action for libel, but the outraged person has not taken up the challenge. The Rev. A. A. ISAACS at Leicester, supported by a Committee, has made grave charges against the management of the Leicester Dispensary, but the Board in place of taking up his challenge, decided to ignore them, and rejected his very reasonable proposal, that Drs. MARRIOTT and BENFIELD, himself,

and five other members who waited on the Board, should join the Board for the purpose of investigation. We have mentioned the salary received by the manager, who does not confine his attention purely to the dispensary, but who follows other avocations. We have not seen what remuneration has been received by the medical officers of this model provident institution. 35,583 subtracted from the population of Leicester and the neighbourhood make a very considerable inroad into the *clientele* available to those practitioners who have to live by their profession in Leicester, and here the injury to the profession generally is experienced. The 35,583 do not pay an adequate rate, and if the principle of this form of contract were carried out in the trades to which the workpeople themselves belong, there would very soon be a strong outcry against it. Medical labour seems to stand on a basis of its own, and its provisions to rest on a violation of the ordinary laws of political economy. The plea of poverty is raised by philanthropists, and by promoters on behalf of the working man, and the provident dispensary is the outcome. Who does it provide for; who is it provident for? Experience tells us that the medical men attached to these dispensaries earn a wage that even scavengers would reject, it does not provide for them or their families. Does the working man even gain? Does he obtain the best advice, and the best drugs? or has he to content himself with medicine furnished in his own bottles; or to take drugs made of methylated spirit, or putrefying infusions of quassia and gentian. It is possible to obtain even medicine and medical advice too cheaply. The Leicester institution does certainly provide for one person. The position of the model provident dispensary of England, with its secretarial manager at £710 a year, after twenty years of life, is not calculated to strengthen the confidence of the profession in this class of institution; and when it is possible to have such allegations made against a dispensary which claims to stand in the first rank, what shall we say of the condition of the numerous other institutions of the same kind scattered over England?

Annotations.

“Forsan et hæc olim meminisse juvabit.”

THE LATE EMPEROR OF GERMANY.

THE Emperor is dead! Long live the Emperor! We heartily join in the last wish, and hope that the Emperor may be spared after what he has already suffered, not only through his illness, but through the surroundings of it. We have been told that the Emperor read what was published in the papers about him, and it must have been very unpleasant reading, especially if he saw some of the papers, in which it was stated that he was suffering from syphilis, and that he was improving under the use of iodide of potassium. We should congratulate him if the very first action of his reign were, to issue an Imperial Ukase that his own case should not be discussed in any German medical

paper, and that his own physicians should refrain from publishing a single line, except an official bulletin, counter-signed by one of his officers of state. *Le Secret medical* is inviolable in France, the meanest subject is protected by it; damages can even be obtained for its violation. The unseemly criticisms of a portion of the medical press, and some eminent professors, is detrimental to the best interests of medicine. Sir Morell Mackenzie has had no ordinary case to deal with; almost the responsibilities of an empire rested on him, and we believe he has borne himself all through with a dignity worthy of his responsibilities. The general principles involved in this case affect every practitioner in the kingdom, and if the tactics pursued against Sir Morell Mackenzie were adopted in English life, the practice of medicine would be more arduous than it is. Emperor, King, Queen, even Commoner, have a right to choose their own medical adviser; when in each individual case the adviser has the confidence of his client, we cannot admit the right of outsiders to interfere. When other consultants are sought, and a difference of opinion is expressed, it rests with the patient to decide as to what advice shall be accepted. The responsibility of treatment rests upon the person or persons selected. The best ethical principles have been laid down on the attitude of those whose advice has been rejected; they have to give up the case, after stating their disagreement, which is purely a matter for the patient's relations. We have all along laid down the dicta that the question at stake rises far above personalities, and we trust that some good may come even out of the discreditable performances of disappointed specialists.

THE UNIVERSITY OF LONDON AND THE NEW CHARTER.

At a meeting of Convocation of the University of London, March 6th, the following resolution was carried by a large majority—viz., “That Convocation desires respectfully to express regret that the Senate has not seen fit to take action against the petition to the Crown of the Royal College of Physicians and the Royal College of Surgeons for a charter enabling them to confer degrees in medicine.” There is a diversity of opinion between the Senate and Members of Convocation.

THE BACILLUS OF CANCER.

M. RAPPIN, in the *L'Union Médicale*, states that he has separated the bacillus, or micrococcus of cancer, closely resembling the micrococci met with in suppurating surfaces. This bacillus M. Rappin describes as a diplococcus, consisting of two more or less regular spheres, the point of junction of which does not take the aniline dye. They have been found in sections of the cells and alveoli of cancer, and have been successfully cultivated in sterilised gelatin. Inoculation of a rabbit with this culture was followed in three months by cachexia and nodules of malignant disease. Portions of these nodules gave under culture the same diplococcus. They have subsequently been found in the blood. Further researches are however required.

A WISE SCHEME.

THE School Board at Baltimore, Maryland, are leading the way in a practical measure of school reform. They have requested the mayor and city council to authorize the appointment of a physician, who shall be known as the Sanitary Superintendent of Public Schools, whose duty shall be—(1) To examine carefully all plans submitted for the construction of new schoolhouses, and suggest such modifications as may be necessary from a sanitary point of view; (2) to advise with the Commissioners with reference to necessary alterations in school buildings to improve their hygienic condition; (3) to examine all text-books before adoption, in order that type, printing, or paper injurious to the eyesight of pupils may be avoided in selecting such books; (4) to satisfy himself, by personal experience, if necessary, that all pupils admitted to the schools have been properly vaccinated, or are otherwise protected against small-pox; (5) to take such other measures, in conjunction with the Health Commissioners of the city, as may be necessary to prevent the spread of contagious diseases in, or through the medium of the public schools; (6) to examine annually the eyesight of all children attending the public schools, and keep an accurate record of such examinations; (7) to report annually, or as often as may be required by the Commissioners, upon the sanitary condition of the schools, and of the pupils attending them, and to advise the Commissioners upon sanitary questions connected with schools whenever required; (8) to give instruction, by lectures or otherwise, to the teachers in the schools upon the elementary principles of school hygiene.

THE IMPROVEMENT OF BRITISH HEALTH RESORTS.

WE have endeavoured, and with a certain degree of success, to bring into prominence our English health resorts, and we have described the climate of Harrogate, Bath, Buxton, Leamington, Hastings, Scarborough, Southport, Lytham, Tunbridge Wells, Matlock, Malvern, Bournemouth, Woodhall Spa, etc. We must admit that a great deal has yet to be done before we can compete with foreign watering places. In the first place, the cost of living will have to be reduced. Even allowing for the expense of travelling and bath taxes, it is cheaper to go abroad. What is evidently wanted in England is a greater attractiveness. We thoroughly agree with Dr. Drummond, Rome (*British Medical Journal*, March 10th):—"There are many south coast sanatoria which, if properly developed, would often enable the invalid to remain in England. My own experience, while practising in Devonshire long ago, convinced me of this; but for the completeness of such, an entire reorganization, by the establishment of winter gardens, pleasure grounds, baths of various kinds, libraries, and really good cheap music, would almost in any case be required. It is incomprehensible to me that some such organization as that at Carlsbad, which, with certain local modifications, exists in every spa in Germany, should not long ago have been applied in England."

THE INDIAN MEDICAL SERVICE.

THE influence of the Medical Service in India has never been as fully (or as deservedly) recognized as it ought to have been. Our Indian medical officers by their work have become civilizers, and helped to consolidate the empire. We are not surprised at the *Indian Medical Gazette* making the following statement:—"Wherever English dominion extends, or whatever mission is undertaken beyond the boundaries of English rule, the dispensary accompanies or follows the occupation or sojourn of our officers, and the inhabitants flock to it for succour. The political importance of this remarkable feature of our conquests, annexations, and expeditions in the east, has frequently been pointed out by military and political officers, and we have recently had the gratification of reproducing the emphatic testimony borne by a distinguished soldier and administrator, Sir Neville Chamberlain, to the help which Indian medical officers, serving on and beyond our frontiers, have rendered in reconciling turbulent and suspicious races to our rule. This influence is now being carried into effect in Beluchistan and Burmah, and we have no doubt that the present generation of Indian army surgeons will fully sustain the reputation for humanity and skill gained by their predecessors."

"ROUGH ON RATS."

THIS is the name of a vermin destroyer. We learn from the *Australian Chemist and Druggist* that it is used as a favourite method of suicide in the colony. The following chronicle tells its own tale:

At Sydney, on December 15th, a woman named Emma Smith unsuccessfully attempted suicide with "Rough on Rats."

At Invercargill, on November 29th, an old resident named John Vint, engaged as a hawker, committed suicide by taking "Rough on Rats." At Wellington, on November 26th, Mrs. John Martin used the same poison to end her life. The vomiting it caused was attributed by her husband to drink, and no medical advice was obtained. The verdict was temporary insanity, joined with a severe censure on the husband for his neglect.

At Sydney, on December 9th, Mrs. Mary J. Joyce committed suicide by taking "Rough on Rats." An intemperate woman named Mrs. Annie Upton committed suicide on November 30th, at Sydney, by taking "Rough on Rats."

On December 5th, at Hobart, a stonemason named William Joseph Gillon committed suicide by taking a solution of "Rough on Rats."

Is it not time for Government interference?

EXTERMINATION OF RABBITS IN AUSTRALIA AND NEW ZEALAND.

M. PASTEUR's plan for the extermination of rabbits in Australia and New Zealand, where these animals have multiplied to such an extent as to have become a plague, is to water the herbage with decoctions of the chicken-cholera-culture. The rabbits are prone to take the disease which is fatal to them, and they die by hundreds in their burrows. An account is given in *L'Union Medicale* of a trial of this plan upon the property of a lady at Reims, attended with full and perfect success. We await with interest the proceedings in Australia, whither M. Pasteur's delegates have gone.

THE UTERUS IN THE LAST MONTH OF PREGNANCY.

At a meeting of the Obstetrical Society of Philadelphia, February 2nd, Dr. Hamill exhibited a uterus removed from a woman in the last month of pregnancy. The uterus was removed about twenty-four hours after death. "I was present when the patient died, and wished to remove the uterus immediately, but could not obtain the consent of the family. I shall very briefly call attention to the several conditions noticed: The outer surface of the uterus is studded in many places with syphilitic nodes. The woman had contracted syphilis early in her married life, and manifested other marked symptoms of the disease. There is also a small cyst of the broad ligament. The specimen presents quite markedly the contraction ring, or ring of Bandl. I give both designations advisedly, inasmuch as it is not definitely determined whether this ring represents the internal os, as Bandl asserts, or marks the boundary between the upper and lower uterine segment, as Schröder believed. According to the investigations of MacDonald, Müller, Sängner, and Lusk, this condition does not always exist. In three autopsies made by Lusk he failed to find any trace of Bandl's ring. Schröder, in a frozen specimen, found this ring very distinctly, but claimed that it was the dividing line between the upper and the lower uterine segment. Bandl holds the contraction ring of Schröder to be the true internal os, and consequently one would expect to find below this ring the cervical mucous membrane, whereas the portion between Bandl and Müller's ring is covered by decidua. Bandl explains this by his three hypotheses: (1) the deciduous membrane is crowded down into the cervix by the weight of the presenting part; (2) in primiparæ the advancing head strips off the mucous membrane, which is replaced by decidua; (3) the cervical mucous membrane is transformed into decidual membrane during pregnancy. Another interesting feature, which the specimen demonstrates beautifully, is that condition pointed by Leopold and Lusk as seen in their Cæsarean sections—viz., the delicate filamentous bands running from the chorion to the decidua, which are the atrophied villi of the chorion. The attachment of the placenta is to the posterior wall of the uterus."

THE MUSICAL PRODIGY, JOSEF HOFMANN.

This boy is much to be pitied, looking at the fate of other prodigies. The state of his health, according to the American medical journals, is attracting attention, and we hope that the little man will not be taken for some time on tour. He is ten years and a half old, and weighs about sixty-three pounds. According to the *Medical News*, Philadelphia, he performed at his last concert a long concerto by Beethoven, with orchestra; a polonaise with orchestra, a duet with harp, an improvisation, and four solos. He says that he was very much fatigued after this concert, which occurred in the evening. He urinated freely after each piece, and wet his clothing while performing. He complains that he is much fatigued by travelling. He plays with toys, etc., like other boys of his age, but much of his time is

taken up by a certain amount of work which he has to do in public. It is evident that his concerts have become irksome to him, although his intense love of music is undiminished. If the boy is taken on tour, there cannot be a doubt that the number of pieces should be cut down, and he should have ample time for rest between his public performances.

POISON IN HAIR DYES.

LADIES will use hair washes and dyes, and other toilet product, to make themselves beautiful. They resort to the advertised vegetable hair dyes, which are supposed to be harmless. The *American Druggist*, January, gives us some examples of these vegetable dyes. "Eau des Fées" is a solution of sulphate of lead in hyposulphite of soda. "Eau Figaro" consists of three solutions: (1) nitrate of silver and sulphate of copper; (2) sulphide of sodium; (3) cyanide of potassium (to remove the silver stains). "Eau des Fleurs" is composed of rose water, 95.5; flowers of sulphide, 2.7; acetate of lead, 4.22; sulphuric acid, and camphor. Passing to cosmetics: "Lait de Ninon" is composed of bismuth and zinc; "Eau de Castille" of hyposulphite of soda and acetate of lead. Pomades against baldness all contain cantharides and croton oil. So ladies had better beware; there is danger in trying to be beautiful for ever.

THE VICTORIA INFIRMARY, GLASGOW.

THIS hospital seems now to be fairly under weigh. The constitution will shortly receive the sanction of Parliament, and the legal difficulties which were in the way of a sum of £10,000 being added to the building fund seem to be surmounted. If all goes well building operations will be begun in April. The committee who have had the framing of the constitution have made a departure which will have important results by giving working men direct representation on the board of management. It still remains, however, to fight the battle against "subscribers' lines." In both the other Glasgow hospitals it is necessary for admission to get an order from a subscriber of one guinea or upwards. The result of this arrangement is, that not a few persons get admission to the hospital who have no right to its privileges, and on the other hand many cases of acute disease are excluded from the difficulty of getting orders. It appears, however, as if the abuse is likely to die hard.

GENERAL MEDICAL COUNCIL AND UNQUALIFIED PRACTICE.

At a meeting of the Executive Committee of the General Medical Council, the following report was adopted:—"A registered medical practitioner would render himself liable to the censure of the Medical Council in case of the employment of an unqualified assistant in the practice of medicine, surgery, or midwifery, on behalf and for the benefit of such registered practitioner, either in complete substitution for his own services, or under circumstances in which due personal supervision and control are not or

cannot be exercised by the said registered practitioner. The Executive Committee furthermore take this opportunity of stating, in reference to the procedure known as 'covering,' that in its view a registered practitioner covers an unregistered person when he does, or assists in doing, or is party to, any act which enables such unqualified person to practice as if he were duly qualified."

THE NEW ROYAL WARRANT.

VOLUNTEER surgeons should carefully read and digest the following Royal Warrant:—

ROYAL WARRANT.

ESTABLISHMENT OF ARMY MEDICAL RESERVE OF OFFICERS.
VICTORIA R.

Whereas We deem it expedient to provide for the establishment of an Army Medical Reserve of Officers:

Our Will and Pleasure is that the following shall be the conditions under which the said Reserve shall be formed:—

1. The ranks of Officers of the Army Medical Reserve shall be those of Surgeon-Major and Surgeon.

2. Medical Officers of Our Militia, Yeomanry Cavalry, and Volunteers, who may desire and be permitted to join the Army Medical Reserve of Officers, shall undertake to perform Army duties at home under rules to be fixed by Our Secretary of State, and to act under the orders, for administrative purposes, of the Director-General of the Army Medical Department.

3. Acting Surgeons, and Honorary Assistant Surgeons, of Volunteers may be permitted to join the Army Medical Reserve of Officers if they have passed the prescribed examination for proficiency.

It is Our further Will and Pleasure that the rank of Surgeon-Major shall be conferred on those Surgeons of Our Auxiliary Forces who may desire and be permitted to join the Army Medical Reserve of Officers on completion of 12 years' service from the date of their first appointment to the Auxiliary Forces; and also that Acting Surgeons, and Honorary Assistant Surgeons, of Volunteers permitted to join the Reserve shall be granted the rank of Surgeon therein.

Given at our Court at Windsor, this eighteenth day of February, 1888, in the 51st year of Our Reign.

By Her Majesty's Command,

EDWARD STANHOPE.

Secretary of State's Instructions on the foregoing Warrant.

1. No Medical Officer of the Auxiliary Forces shall be appointed to the Army Medical Reserve who is not medically fit for service, and whose character and qualifications are not in all respects satisfactory.

2. The names of all Officers of the Army Medical Reserve shall be included in a special Army Medical Reserve List.

3. Officers shall be removed from the Army Medical Reserve List on attaining the age of 65.

4. Officers of the Army Medical Reserve shall be liable to be called to Army service at home, in times of great national emergency, to take the place of such of the Medical Staff of the Army as may be withdrawn for active service, and when so called out shall receive the pay and allowances of their rank.

5. Medical Officers of the Auxiliary Forces who may be permitted to join the Army Medical Reserve shall undertake to accept the charge of the Officers and men of any detachment of troops, not having an Officer of the Medical Staff attached to it, at any station at which they may reside, with the rates of remuneration laid down in Art. 354 of the Royal Warrant for Pay, etc., 1887.

6. Officers of the Army Medical Reserve who are willing to offer their services will have a prior claim to employment in the district in which they reside to other Medical Officers of the Auxiliary Forces, or to civilian medical practitioners.

7. The acceptance of appointments in the Army Medical Reserve

will in no way modify the position of Medical Officers in the regiment or corps of the Auxiliary Forces to which they belong.

8. Officers wishing to apply for appointment to the Army Medical Reserve will forward their applications, through the Officer commanding the corps to which they belong, to the General Officer commanding the District, for transmission to the Military Secretary.

New Materia Medica.

Anthrarobin is the name given to some new compounds which are being sent into commerce for the treatment of skin diseases. Some time since, in attempting to reduce chrysophanic acid to chrysarobin Professor Liebermann found that this change could not be effected, the reduction taking a different direction, and a body being formed in which one atom of oxygen was replaced by two of hydrogen, but nevertheless yielded chrysophanic acid on oxidation. In following out his researches on other colouring substances of the anthraquinone group, it was found that alizarin, anthrapurpurin, anthragallol, flavopurpurin, and other allied compounds, yielded similar reduction products, which have the same property of rapidly absorbing oxygen, and reproducing the body from which they were reduced. Professor Liebermann, believing that the value of chrysophanic acid is chiefly due to its power of absorbing oxygen, considered that the physiological action of these bodies would probably be similar in character to that of chrysophanic acid. This idea has been proved to be correct as regards some of the new bodies, Dr. Behrend reporting that the alizarin product is effective in all cases in which chrysarobin has given relief, to which, however, it is somewhat inferior, though more active, than pyrogallol acid. It is the alizarin product which is at present offered in commerce under the name of anthrarobin; the allied product derived from purpurin being, however, also in use, but distinguished by the addition of the letter P or F. Anthrarobin is a yellowish white powder, tolerably stable in the air if kept dry. It is not soluble in water or aqueous acids, but readily soluble in dilute alkaline solutions with a brown yellow colour, such solutions absorbing oxygen with avidity, and passing through green and blue to alizarine violet. It is less easily soluble than chrysarobin in benzol and chloroform, but dissolves more readily than it in alcohol. It is also soluble in glycerine. It is made by boiling commercial alizarin or purpurin with zinc dust and dilute ammonia solution, filtering off the ammoniacal solution into hydrochloric acid, and collecting, washing, and drying the precipitate. The commercial article yields about $\frac{1}{3}$ per cent. of zinc ash. The advantage claimed for the new product by Dr. Behrend is that it produces no inflammation of the cuticle. It colours the skin slightly brown, but the stains can easily be removed from linen or cotton by soap and soda.

a-Naphthol is now put forward by M. Maximovitch as an antiseptic, possessing the advantage over β -naphthol of being three times less poisonous. It is insoluble in cold water, but dissolves in water at 70°F., to the extent of four parts in 10,000, the solution being of a violet colour. It is, however, readily soluble in alcohol and ether. Its antiseptic property has been tested by M. Maximovitch on fourteen different kinds of microbes cultivated in different media. When added to cultivation in bouillon, in the proportion of 0.1 part per 1,000, it completely arrested the development, among others, of the microbes of glanders, chicken cholera, pneumonia, the bacillus of typhoid fever, and the organisms of suppuration *Staphylococcus albus* and *S. aureus*. For cultivation in agar-agar the proportion necessary was somewhat larger in certain cases. Urine after being shaken with an alcoholic solution of *a*-naphthol did not ferment.

Ophioxylon serpentinum, an East Indian plant belonging to the natural order *Apocynaceæ*, has been examined by Professor Bettink, of Utrecht, who has obtained from it a crystallizable substance, to which he has given the name of ophioxylin. It forms orange yellow crystals, of the tetragonal system, having an acrid burning taste; slightly soluble in water, more so in alcohol, and freely in chloroform, benzol, and

carbon bisulphide. The root also contains volatile oil and resin, and a tannin which occurs in a natural combination with the opioxylin.

Cytisine, the active principle of laburnum, and found also in other species of cytisus, has been found by Dr. Kraepelin to be very valuable in some forms of migraine, especially when due to a dilated condition of the blood vessels; this active principle acting powerfully as a vaso-constrictor. In a case in which violent attacks of migraine were associated with vomiting, sleeplessness, photophobia, swimming of the eyes, and unbearable hemicrania, and in which all ordinary remedies had proved useless, the subcutaneous injection of 0.003 gramme of nitrate of cytisine had an immediate effect. In subsequent attacks, it produced a similar good effect, except once, when it was administered by the mouth, and caused immediate vomiting. The dose was ultimately increased to 0.005 grain. In cases where the migraine was accompanied by a good deal of spasmodic action, it had a negative, or even an injurious effect, so that it can only be recommended in migraine of a paralytic type.

Delphinium Consolida has long been known to possess anti-scorfulous properties, but has not been used in this country for many years. Like convallaria, and other valuable remedies which had fallen almost into desuetude, delphinium is now receiving the attention in Russia that it probably deserves. Dr. Krasnogradoff has directed the attention of the Caucasian Medical Society to the value of the plant in scrofulous affections, he having obtained successful results from its use.

In an original communication to the *Medical Bulletin* (January, page 10), Dr. S. T. Landry speaks of the value of *Nabalus altissimus* in a case of traumatic gangrene. In the case which came under his notice, the leg was black, and the patient sleepless and wild with pain. The leaves were washed and applied all round the limb, and left there for twelve hours, almost instant relief to the pain following the first application. After removal, damp tobacco leaves were applied for two hours. In two weeks the leg was healing, and comfortable.

Dr. Landry has equal faith in the value of *Inula Helenium* for the treatment of elephantiasis, for which, he states, it is a specific, if ever there was one. The affected part is bathed in a strong decoction of the fresh root every day for two or more weeks, two to six ounces of the decoction being also taken internally three or four times a day. He states that it never failed to cure in every case when properly used and thoroughly applied. Its value most probably is due to the antiseptic properties of the helenin, which has already been stated to be fatal to the *bacillus tuberculosis*.

Another plant which does not previously appear to have been used medicinally, but which is recommended by Dr. Landry, is *Zinnia elegans*, a favourite garden flower in this country. He states that the bruised petals, mixed with wood ashes, eased the pain of burns as if by magic. In this case, however, some of the credit is due, without doubt, to the alkaline character of the wood ashes, which would produce the same effect as carbonate of potash or soda.

A new artificial alkaloid has lately been discovered, to which the name of *Oxy-propylen-di-iso-amylamine* is given. It is prepared by the action of hydrochloride of propyl on di-iso-amylamine. It forms an oily colourless liquid, only slightly soluble in water, but soluble in alcohol, and forming very soluble salts with acids. The physiological action of this body has been investigated by E. Louise. On the nervous system it acts something like atropine, but in toxic doses causes epileptic seizures of two kinds. In moderate doses it is a powerful cardiac tonic, and an energetic stimulant of the circulation, and the cerebro-spinal centres. In its action on the heart it resembles atropine, paralysing the inhibitory apparatus, and increasing the action of the accelerating nerves. There is remarkable augmentation of the intra-vascular pressure, and marked elevation of the temperature of the body in cases of acute intoxication. The toxic dose for a man weighing sixty-five kilogrammes is thirteen grammes.

Grandiflorine is the name given to a new poisonous alkaloid discovered by Dr. Domingos Freire, of Rio Janeiro, in the fruit of *Solanum grandiflorum* var. *puberulentum*, known as wolfspear, or *Fruito do lobo*. The alkaloid has a bitter taste, but the quantity as yet prepared is insufficient for a complete investigation. The plant from which it is obtained is, however, known to be speedily fatal to sheep.

New Remedies.

Antipyrine has been tried by Sonnenberger in whooping-cough with favourable results in seventy cases. The dose given to young infants is half a grain to one and a half grain three times a day. For older children the dose may be increased up to fifteen grains. The syrups of tolu and orange are recommended as agreeable media for administering the drug. According to Fraty, antipyrine has an influence somewhat like that of the alkaline bromides, in some cases of epileptic convulsions; but large doses are necessary—viz., as much as three to eight grammes every day. In some cases the remedy causes malaise, and has to be discontinued.

The value of *pyridine* in asthma has been confirmed by Relemen, who has tried it extensively in diseases of the lungs and heart. In nineteen cases the vapour acted energetically as an anti-asthmatic, half a drachm or so of the liquid being allowed to evaporate at some little distance from the patient. In emphysema the improvement lasted from eight to twelve hours, but the most beneficial effects of the drug were seen in cases of cardiac and nervous asthma.

Dr. J. T. P. McConnell points out in the *Practitioner* (February, p. 95) some new uses of *Cannabis Indica*, or at least uses which appear to have been overlooked or neglected in this country. In Bright's disease, dyspeptic diarrhoea, or loss of appetite consequent upon exhausting diseases, he found it of great use; also as an hypnotic in chronic cardiac disease. He considers the value of the tincture depends to a considerable extent upon its being prepared from the fresh plant in India. This may be so, but it has been pointed out by Dr. Watt that the strongest kind of the drug, which is in the form of cylindrical (not flattened) tops, rarely, if ever, comes to this country.

Cascara sagrada would probably be much more extensively used were it not for the great bitterness so frequently found in preparations made from it. A method of removing this bitterness without interfering with the medicinal properties of the drug has been suggested by M. Granger, of San Francisco. This consists in mixing thoroughly one pound of coarsely powdered cascara sagrada with a magma of an ounce of calcined magnesia, and ten ounces of water, packing the mixture in a percolator, and allowing it to stand twelve hours before percolation with alcohol. The product is said to be free from bitterness, and to have an agreeable, mild, somewhat astringent, taste; while it is equally as active as the bitter preparation. From an examination of the bark made by Messrs. H. T. Meier and J. Le Roy Webber, it appears that the aqueous extract of the bark has naturally an acid reaction, and that if kept, it becomes increasingly so, giving rise to a precipitation of the resins. In an alcoholic solution, although the same changes may take place, the resin will naturally remain in solution. The decomposition that takes place in the bark is due to a ferment, precipitable by subacetate of lead. This ferment, according to the author, develops vegetable acid from the glucose present in the bark, and the acids so developed, decompose a glucoside present in the bark. It is to the decomposition of glucoside that the authors attribute the bitterness of the fluid extract, and the tonic properties it possesses, the laxative action being due to the resins.

Strophanthin, the glucoside obtained from *Strophanthus Kombe*, is stated by Dr. Dujardin-Beaumetz to be deficient in the powerful diuretic action produced by the tincture of the seed.

Periscope.

I.—GLEANINGS IN MEDICINE.

By W. B. KESTEVEN, M.D.

Salicylic Acid in the Treatment of Herpes Tonsurans (*Der Fortschritt. Genf.*, February 5th, 1888).—A solution of one part in ten of salicylic acid in alcohol, applied daily, will effect a cure in from eight to fourteen days. This solution reaches the pores of the skin, and sheathes of hair, more rapidly and more effectually than any medicated ointment.

Unroasted Coffee a Remedy in Migraine (*Der Fortschritt. Genf.*, February 5th, 1888).—The medical profession, and the people generally, in the Antilles find the infusion of green coffee, taken several times a day, to be an effectual remedy in migraine.

Reseda (Mignonette): a Vermifuge (*Journal de Médecine de Paris*, February 5th, 1888).—This plant appears to have a great reputation in Russia for the expulsion of tapeworm. A strong decoction of the dried flowers was taken on an empty stomach by a woman suffering from the presence of a *tœnia*. This was followed by a full dose of castor oil; the worm was expelled three hours afterwards.

Dangers attending the Use of Coloured Chalks. By Professor Jungfleisch (*Fortschritt.*, January 5th, 1888).—The drawing-boards are used in many schools for illustrations with coloured chalks which may prove dangerous. These drawings being rubbed off by a dry sponge are a source of danger from the chalks which are coloured with preparations of litharge, chromes, quicksilver, etc. Professor Jungfleisch points out that other and innocuous colouring materials might be employed.

Lactic Acid in Diarrhoea Neonatorum (*Der Fortschritt. Genf.*, February 5th, 1888).—M. Hayem points out that the dose usually given is too small; that from fifteen to twenty teaspoonfuls of a two per cent. solution should be given in the twenty-four hours. He recommends this remedy for obstinate diarrhoea of adults also.

The Hypodermic Injection of Quinine (*Journal de Médecine de Paris*, February 5th, 1888, from *Vratch de St. Petersburg*).—The hypodermic and intra-muscular injection of hydrochlorate of quinine is reported from Russia to be a sovereign remedy in marsh fever. One part of the salt is dissolved in two parts of water; by the aid of heat a portion, containing fifteen centigrammes, of the salt is taken up in a Pravaz syringe, the needle of which is plunged perpendicularly into the glutæi. The injection, it is stated, produces no irritation or induration of the tissues.

The Distribution of Non-Striated Muscular Fibres in the Muscular Coat of the Small Intestines. By Kultschitzky (*Fortschritt. der Medicin*, Berlin, February, 1888).—According to the author, the muscular fibres are inserted immediately beneath the epithelium, and near the Lieberkuhn's glands, and pass in the long direction of those glands without definite relation to the lacteals of the villi. Some fibres also run parallel to the axis of the villi, and by their contraction effect shortening thereof. The curved direction of the fibres dilates the central canal, thereby facilitating the outflow of the chyle. Striated muscular fibres are not met with in the villi.

Illustrations of the Histologic Changes of the Nervous System in Leprosy. By John C. Shaw, M.D., Brooklyn (*Brooklyn Medical Journal*, January, 1888).—The author of this paper quotes opinions from many authorities upon the pathology and etiology of leprosy, and observes that the theory of contagion is rapidly spreading, and urges the isolation of patients suffering under this disease. An examination of the central and peripheral nervous system, in one case, showed us marked changes in the spinal cord. The peripheral nerves showed an amount of induration in marked contrast with normal nerves. Interstitial and perineuritis were found everywhere. The connective tissue of the nerve bundles was dense. There was a remarkable absence of fat among these. Few nerve-tubes were left; it was almost impossible to find a trace of myeline. Here and there a solitary axis cylinder could be found, devoid of myeline covering. Around the nerves there was a large increase in the number of nuclei of connective tissue. A mass of lepra cells was to be seen in the centre of the nerve bundle, in one instance that was examined. A small nerve bundle was found to be filled with a large number of irregular-shaped bodies, the nuclei of which were sharply stained with logwood. Numerous cavities and vacuoles were to be seen in these bodies—the so-called lepra cells of Virchow. The bacilli of lepra were seen in abundance. The disturbances of sensibility are due to neuritis and perineuritis of the peripheral nerves. Daniellson and Bock describe sclerosis of the cord with atrophy of cells. Langhaus has discovered softening of the posterior horns and of Clark's column, in the cervical and dorsal regions. Other pathologists have also described these pathological changes.

Chloride of Methyl, a Local Anæsthetic (*Gazette Hebdomadaire des Sciences Médicales de Bordeaux*, February 5th, 1888).—M. Duboué has extolled the effects of chloride of methyl in neuralgia, especially also in sciatica, and has employed it as a local anæsthetic. M. Bailly, of Chambly (Oise), has modified and carried to perfection the mode of application of this remedy, and has submitted his modifications to the Academy of Medicine, upon which M. Vidal has drawn up a report in the *Comptes-rendus*, in the *Bulletin Medical*. The report shows the modes of local application of this local anæsthetic in neuralgia. M. Bailly has simplified the method of its use, so that instead of its employment in a gaseous form, he has by means of a

specially contrived apparatus—a form of tampon or pledget—been able strictly to localise its action, and restrict it to a limited point. The application continued for a few seconds produces a sensation of cold, which is followed by a reaction; if continued further, sensibility is blunted, the part become of a pale tint, and reaction occurs with a sense of itching; persevered in beyond this stage, phlyctenæ and eschars may be formed. The liquid chloride of methyl requires a special apparatus, which M. Bailly designates *le stype*, and its employment *stypage*. M. Bailly reports cures in twenty-six cases of dental neuralgia, eight cases of sciatica, sixty-two of various forms of neuralgia, and numerous cases of lumbago, and in visceral pains of various character. The application of chloride of methyl has also been reported to have been found of signal service in some minor surgical operations. M. Berniers has employed stypage in the treatment of affections of the mucous membrane of the vulva, etc., the parts being previously covered with gold-beater's skin, which prevents the production of eschars. The sensation of cold from the chloride of methyl is as intense as that from ether.

A Coincidence of Human and Poultry Diphtheria (*L'Union Médicale*, February 14th, 1888).—M. Menzies has traced an outbreak of diphtheria in Naples to the pollution of drinking water by the dung of pigeons, the water from the roofs of the pigeon houses finding its way to the source of the drinking water. M. Menzies states that of a population of 4,000 individuals, 125 were attacked, of whom thirty-six died. This occurred in 1884 at Skiotos, an island at the north of Greece. It was found that diseased turkeys had been introduced into the island. Among these birds a form of disease resembling human diphtheria had been developed. The virus, he states, was conveyed by the air to human beings, and gave rise to the epidemic.

On the Influence of Lanoline upon Micro-Organisms. By Dr. A. Gottstein, Berlin (*Der Fortschritt.*, January 5th, 1888).—The author, by a series of experiments, states that he has established the fact that lanoline presents the development of microscopic germs. This result has both therapeutic and biological interest. Liebreich has shown that the cholesterine, which enters into the composition of the integuments of animals, presents a chemical composition similar to that of lanoline. Like the latter it prevents their decomposition, and the passage of micro-organisms; and thus provides human and animal bodies a protective covering from organic germs.

Action of Fluid Extract of Quebracho as an External Application. By M. Bordeaux, Geneva (*Der Fortschritt.*, January 5th, 1888).—Quebracho, the author has found to be a useful means of securing cicatrisation, painted over a clean smooth wound it excites a passing and smarting pain, like that of collodion, and promotes healing by the first intention. It is equally serviceable for burns and frost-bites. Painted on the surface the extract hardens in about an hour, and forms a brown crust, which adheres firmly to the tissues, but can readily be removed by warm water. If left to dry on, it will, after a time, fall off, leaving the wound healed. Other dressing is not required.

[Quebracho bark, from the *Aspidosperma quebracho*, is imported from the Argentine Republic, in pieces of about three-quarters of an inch thick, with a fibrous cinnamon-coloured interior. It has a bitter, slightly aromatic taste. It contains six alkaloids.—*Extra Pharmacopœia*, 1885, p. 295.]

Terchloride of Iodine as an Antiseptic and Disinfectant. By Langenbech (*Centralblatt für Chirurgie*, February 4th, 1888).—The terchloride of iodine is a volatile, orange coloured powder, with a pungent odour, and requiring to be kept in a closed glass tube. Dissolved in water it forms a mahogany coloured solution, which must be protected from the action of light, as this converts it into a monochloride, which, however, has also antiseptic power. These changes in solution are rapidly effected on coming in contact with organic matter. The chlorine and iodine are liberated in a nascent state. For surgical purposes the author employs a solution of 1 in 1,000, to 1,500, a degree of concentration which is about equal to a four per cent. solution of carbolic acid, or half to one per cent. of sublimate solution. Riedel states that the destroying influence of the terchloride over spores is next in usefulness to sublimate. The solution is useful for disinfecting the hands of an operator, the sponges, instruments, etc. Applied on gauze or lint it forms a dressing for wounds.

Laparotomy in Extra-Uterine Pregnancy. By Geo. R. Fowler, M.D., Brooklyn (*Brooklyn Medical Journal*, January, 1888).—The patient in this case was suffering from an abdominal tumour, and symptoms of septicæmia. She stated that she noticed enlargement of the abdomen about a year and a half before she had consulted a physician. No clear history could be obtained as to disturbance of the menstrual function at that time, but she asserted that they had latterly been "quite regular." An ovarian suppurating tumour was suspected, and

an operation was determined upon. Laparotomy was performed, and upon the first incision made, the head and limbs of a seven months' foetus were clearly discerned through the thin envelope. This being punctured, gave exit to about half a gallon of "most horribly offensive fluid and debris." A hot solution of hydro-naphthol was poured into the abdomen, and the contents of the sac were turned out. A drainage-tube was placed at the lower angle of the wound, and the patient placed on her side to favour the draining away of the hydro-naphthol solution. Nothing untoward occurred in the after history of the case. In a month after the operation she was "out shopping."

Bright's Disease (Large White Kidney) : its origin in Poisons engendered within the System. By M. Gaucher (*L'Union Médicale*, January 17th, 1888).—M. Gaucher reviews the pathological opinions which regard the large white kidney as a chronic epithelial nephritis, and recognises a different pathological source—toxic—originating insidiously in a poison produced within the organism itself. This poison is of a complex nature, consisting of extractive matters, which are the results of the imperfect oxidation of nitrogenous substances. From his experiments, M. Gaucher considers that he has proved the noxious action on the kidney of these poisonous matters. By the daily subcutaneous injection into guinea pigs of a watery solution of creatine, leucine, or tyrosine, the urine of the animal was rendered albuminous. The animals finally die, and on *post-mortem* examination the kidneys presented all the characteristics of "white kidney." Thus it appears that the accumulation of extractive materials in the blood may irritate the secreting epithelium, and give rise to a parenchymatous nephritis. All these extractive materials exist normally in the blood in minute quantities, but are greatly augmented in pathological conditions. In the first place, disorders of the liver hinder the transformation of nitrogenous matters, at the same time that the excretion of the urine is diminished. Thus it is that albuminuria frequently accompanies jaundice and diseases of the liver. In all chronic diseases the elimination of nitrogenous matter is interfered with, and a toxic influence exerted upon the kidneys. It is not only in disease that the extractives exercise a modifying action upon these organs. Articles of food containing imperfectly oxidised nitrogenous substances, such as meat extracts, bouillon, etc., retard elimination. Thus the administration of these articles of diet in cases of nephritis is contra-indicated. In Bright's disease, M. Gaucher considers bouillon as a poison. Even in health these preparations of meat may exert an injurious influence, but it follows that in chronic disease a double danger is incurred by the accumulation in the system of such toxic materials through their defective elimination.

On the Diuretic Action of Caffeine and Allied Substances. By W. von Schroeder (*Fortschritte der Medicin*, January 15th, 1888).—V. Schroeder has previously shown that caffeine acts directly upon the renal epithelium, at the same time that a contraction of the vessels is occasioned by this agent. Caffeine, it is known, causes not only a general reflex spasm of the vessels, but also by increased action in the central vaso-motor apparatus, a spasmodic tension of the vessels, leading to augmented blood-pressure. Division of the vaso-motor nerves of the kidneys, or narcotism of the nervous centres, allows the action pure and simple of caffeine upon the renal epithelium. The author had used chloral, but now employs paraldehyde for the narcotising of the nervous centres. This substance, administered alone to rabbits, increases the quantity of urine to the amount of one per cent. of the weight of the body; when given with caffeine, the diuresis is raised to from three to five per cent. of the same weight. The relative proportion of solid material is at the same time increased from fourteen to fifteen per cent. The mass of blood in a rabbit being estimated at from 100 to 150 grammes, this would imply a loss in the blood of from one to two grammes of water, the quantity of urine being augmented from 100 to 130 grammes. Caffeine has no similar diuretic action in dogs, a noteworthy fact, which remains to be accounted for.

Hemiatrophy of the Tongue : State of Nerve-Roots (*Fortschritte der Medicin*, March 1st, 1888).—M. M. Marie and Koch had recently an opportunity of examining the hemiatrophied tongue, in a case of tabes. The hypoglossæ on the atrophied side were notably degenerated. The multipolar cells were few in number, and but few nerve-fibres were given off. The cells of the accessory hypoglossal nucleus were wasted away. It was interesting to find that fibres passing from the raphe to the nuclei were not all atrophied.

Ganglions in the Palm of the Hand, as a cause of Neuralgia. By Dr. O. Witzel, Bonn (*Centralblatt für Chirurgie*, February 25th, 1888).—The author relates cases of ganglion cysts, which had been the cause of severe neuralgic pains, extending up the entire upper extremity from the palm of the hand and flexor tendons to the shoulder. The use of the limb was in some cases destroyed, and cure only effected by the removal of the cyst.

II.—NOTES FROM RUSSIAN JOURNALS.

By VALERIUS IDELSON, M.D., BERNE.

Permanganate of Potash as an Emmenagogue.—In the *Meditzinskoi Obozrenië*, No. 19, 1887, p. 581, Professor Ivan M. Lvoff, of Kazan, publishes a valuable clinical paper on the use of permanganate of potash as an emmenagogue. The paper is based on as many as 187 consecutive cases of amenorrhœa and dysmenorrhœa, which the author has met since the appearance of Drs. Sydney Ringer's and W. Murrell's communication in the *Lancet* (June 6th, 1883), and in all of which he invariably employed the drug recommended by these two eminent physicians, whose names and works are scarcely less familiar with the Russian profession than with the British one. The formula used by Dr. Lvoff was always this: $\text{R Potassæ hypermanganicæ, Extracti pulsatillæ sicca ana, 4.0; Vaseline q. s. ut f. pil. No. 60. D. S. To take two pills three times daily.}$ The author divides his rich clinical material into five distinct groups.

The first of them includes thirty cases, referring to more or less *anæmic girls* (virgins), who came to him with complaints to the effect that "their menstruation had of late, without any apparent cause, become gradually more and more scanty, and associated with ever-increasing agonising pain." In many of them, "catamenia, which had been formerly profuse, and of five or seven days' duration, of late lasted some two or three days, and well-nigh left no traces on the patient's linen," while their dysmenorrhœic pain "became unbearable and incessant." The permanganate pills were given daily for seven or ten days before, as well as during, the menstrual period. A similar course was repeated three or four successive times. The treatment was crowned with a uniformly striking success in every one of the cases. In all the patients, already the first menses were by far more profuse and almost painless, while those following a second or third course of the drug proved quite normal in all regards, and remained such thenceforward, without any further use of the permanganate. Neither the duration of the menstrual disorder before the treatment, nor the patient's age, seemed to manifest any influence on the therapeutic result in this group of the cases.

The second category consists of seventeen cases of *absolute amenorrhœa* in women, aged from twenty to forty, "with a hyper-involution of the womb after their last labour, or with atrophy of the uterus and ovaries, which supervened after a prolonged puerperal parametritis, or some other pelvic inflammation." The patients—some of whom were looking rather anæmic, while others were apparently enjoying a flourishing general health—always stated that their last puerperal period had been irregular, and that no catamenia had come since their last delivery, amenorrhœa lasting in some of them as long as two years. All of them complained of headache, cerebral congestion, ear-noises, giddiness, etc. The pills were administered here regularly daily for the period, varying from three to six months. In young and comparatively strong women, menstruation was re-established in about four or six weeks, to recur in due terms ever since. But in rather weak women, aged from thirty-five to forty, menses made their appearance only after the permanganate course of from three to four months' duration, while a due regularity in their subsequent recurrence was regained but gradually (in several months). As regards the nervous symptoms mentioned above, they always disappeared tracelessly in the very beginning of the treatment.

A third group embraces sixty-two cases where, as previously, normal menstruation in formerly healthy women became irregular, scanty, and associated with intense spasmodic pain after the patient had gone through an attack of *puerperal* (or also non-puerperal) *pelvic peritonitis*, but where a careful gynecological examination failed to detect any serious anatomic changes in the womb and ovaries, beyond a slight enlargement or induration of the organs, or cervical cyanosis, uterine catarrh, etc. The drug was given daily for ten days before the expected menses. On the whole, the results were satisfactory also in this category of the cases. In certain patients, however, the permanganate either failed altogether, or brought about but a partial improvement lasting only during the use of the pills. Such less successful results were obtained (a) in cases of dysmenorrhœa of long standing, and (b) in the presence of "a small or also normally-sized womb, with dense walls abounding in connective tissue," as well as in the presence of dense peri-uterine adhesions.

A fourth group is that of sixty-five married, but childless, extremely nervous and hysterical, mostly young women, suffering from amenorrhœa, or dysmenorrhœa with scanty menstrual discharge. All of them were strongly exhausted by some severe acute disease of their genital organs, which had developed during the very first days of the married life, the symptoms being the whittings, irritation about the genitals, extremely frequent and painful micturition, dyspareunia, and menorrhagia. Having examined the vaginal discharge in many cases of the

kind, Dr. Lvoff found Neisser's gonococci in everyone of them. Nearly in a moiety of the patients there were present adhesions of the womb, ovaries, and Fallopian tubes, painful dilatation and distortion of the latter, painful enlargement of the ovaries, chronic metritis, with a scanty muco-purulent discharge, etc. The permanganate gave good and durable results only in a very small number of such cases where no marked morbid lesions about the internal genital organs could be detected. In the remaining patients the drug proved entirely useless, even after a prolonged persistent administration.

The fifth and last group consists of eleven cases of a *premature climacterium* in women, aged from thirty-five to forty, with atrophy of the womb. Permanganate of potash here remained utterly powerless to effect anything beyond removing headache, flushings, cardiac palpitation, and such-like symptoms. Not a single instance of any unpleasant accessory effects of the drug was observed by Professor Lvoff.

It is not difficult to foresee of what nature the author's general corollary might be. Dr. Lvoff thinks that S. Ringer-Murrell's remedy is not only an extremely useful, but simply an indispensable therapeutic acquisition for the gynecological practice. In fact, as far as the first group is concerned, "there does not yet exist any better and more reliable means than permanganate of potash." Nearly the same may be stated in regard to the second category of the cases, which are cured by the drug as surely and as permanently as the preceding group, though sometimes rather slowly.—[Drs. Korotkevitch's and Gerditchevskaja-Tchernobaiëva's recent communications on the subject may be found in the *Provincial Medical Journal*, December 1st, 1887, p. 566.—Reporter.]

Cocaine as a Local Anæsthetic in Reduction of Luxations.—In the *Médecinskoïé Obozrenië*, No. 19, 1887, p. 604, Dr. N. I. Grigorieff, of Myshkin, the Jaroslav Government, briefly details five cases of various luxations (viz., two of sub-glenoidal dislocation of the right humerus in a man of forty, and a woman of sixty; two of luxation of the radius and ulna in the left elbow-joint in women, aged fifty-three; and a case of displacement of the left thumb towards the palm in a boy of thirteen), in which he resorted to cocaine for making their reduction painless. He used a 5 per cent. solution of the hydrochlorate, injecting half a syringeful at three or four points in the neighbourhood of the injured joint (the total amount being, therefore, from one and a half to two syringe-fuls). In about three or five minutes a complete anæsthesia of the parts and relaxation of the adjacent muscles took place. The reduction was quite painless, and could be effected in a "jiffey," the patient manipulated upon, never uttering a sound or moving a limb. The patients were peasants and, as is invariably the case with Russian rustic people, came to the hospital only after they had gone through, and nearly mad from, an obligatory ordeal in the shape of a long series of unsuccessful attempts at reduction, performed by friends and neighbours, young and old, "wise men" and "wise women." The patients' surprise in regard to magical painlessness and rapid effectiveness of a "genuine doctor's" bone-setting manipulations was as intense as agreeable.

III.—EXTRACTS FROM SPANISH AND OTHER MEDICAL JOURNALS.

TRANSLATED BY DR. G. CADOGAN-MASTERMAN.

Carta. . . . acerca du un asesinato que quedó oculto (*Revista de Ciencias Médicas de Barcelona*).—There is an old story of a Highland drover being found dead in the bedroom of a village ale-house, with no sign of external injury but a small puncture at the back of the neck. His companion, who was charged with murdering him, was able to prove that he possessed no lethal weapon, no sound of quarrelling or struggle had been heard; therefore, with some demur, the theory of the defence was accepted, that the man had fallen backwards when helplessly drunk on to a projecting nail on the floor (which was pointed out), and which had passed through the nape of the neck, and so killed him. On his death-bed, however, some years afterwards, the prisoner confessed that he had really murdered the man as he lay in drunken stupor on the bed, by thrusting in the point of a pair of iron snuffers at the spot where the wound was found, afterwards laying the body, with emptied pockets, supine on the floor. And there is, also, a gruesome legend of sundry decrepit hags, and who used, for a consideration, to despatch newly-born infants whose existence was objectionable, by pushing a darning needle into the medulla, through the same perilous interspace between the atlas and the axis, leaving nothing but a bloodless and almost microscopic puncture as the sole outward evidence of the murderous outrage. In Spain there is no equivalent to our generally farcical, but occasionally useful, coroner's jury, the doctor—usually with us the decisive witness—there reports directly to the nearest magistrate, and he, if satisfied, issues the order for the interment or otherwise, in all cases where there may have been

any doubt as to the cause of death. Now, this duty—the verification—may be performed ignorantly or perfunctorily, the body cursorily examined, and mere gossip and inference accepted as trustworthy evidence, and, as an example, the following narrative is given by Don Francisco Ximeno:—A young man, of more than doubtful reputation, was working for a dyer, who lived in an isolated house some little distance from Barcelona, and had contracted improper relations with his sister Marieta. They, in company with another workman as bad as themselves, were engaged in a drinking bout one afternoon on their master's birthday. The latter was generally abstemious, but on this occasion he drank the better part of a bottle of gin, which made him very sick, and he laid himself down on a bed, and fell into a drunken sleep. After a time his breathing became so irregular and stertorous, that Marieta, in alarm, set off to the city to get some medicine. After she had gone, one of the men looked into the bedroom, and said contemptuously to his companion, "See how that sot is sleeping! but I'll soon wake him up." And stepping softly into the workshop, came back with a carpenter's brace and a slender drill in his hand, drew his master's head, with the face downwards, over the side of the bed, and leant over him. There was a quick turn or two of the brace, a piercing scream, a long shuddering spasm, and the man was as dead as a door nail. The two miscreants were at first petrified at the result, then one proposed robbing the house and decamping; but, after a quarrel, they agreed that it would be safer to remain; so they withdrew the drill, wiped away a spot of blood from the scarcely visible wound, laid the corpse on its back, and sat down quietly in the next room until the girl returned. Then pretending to be concerned at their master's long sleep, they advised that a doctor should be sent for. He, on his arrival, found the man, of course, dead; but, from the account Marieta gave in perfect good faith of the gin drinking, the vomiting and stertor, and the well-acted astonishment of the men, all suspicion was averted, and a *procès verbal* was drawn up, in the presence of a second acquiescent doctor, who, like his *confrère*, never thought of looking for a needle-prick at the back of the neck, to the effect that the man had died from alcoholic apoplexy, and he was duly buried. Shortly afterwards, however, Marieta overheard her paramour quarrelling with his confederate over the hush money, and the next day he was found murdered at the back of the house. The criminal disappeared, but apprehended afterwards for coining, was shot in attempting to escape from the hulks, and told the whole ghastly story before expiring. The moral is: In cases of theoretical apoplexy, especially in those called "serous," and in which the excess of serum often exists but in the imagination of the autopsist—carefully examine the *medulla oblongata*.

On the Modern Treatment of Fever. By Dr. Unverricht, Jena (*Ciencias Médicas de Barcelona*).—The history of the theory and treatment of fever in any given epoch, may be said to be for that time the history of medicine itself; opinions and hypotheses of the most contradictory character appearing, flourishing and effacing, only to be in their turn displaced and forgotten, but perhaps resuscitated, from the dust of ages to be once more reburied in completer oblivion. For nearly a quarter of a century the views of Liebermeister have been paramount—that fever is simply an excessive development of the natural heat of the body; the phenomena of accelerated pulse and respiration, and the sensory and muscular perturbation being no more than the direct consequences of this abnormal incalcescence. And, as a corollary, that its treatment resolved itself into the discovery of means for reducing rapidly or slowly the body to its ordinary temperature, when all the dangers attending the disease should simultaneously disappear also. It is interesting to note how this theory having been built upon false (badly interpreted) observations led to the *past hoc* being confounded with the *propter hoc*. It was seen that patients suffering from typhus did better with the cold-bath treatment than under an older system, and as cold water necessarily lowered the surface temperature, this got the whole credit of an improvement really due to the disuse of other remedies, and to the inference that cold would be equally useful in the treatment of every other febrile condition. And when, too, the fallacious system of taking the temperature in the axilla only was trusted implicitly, many talked of the cooling of the whole body when it had really been one of purely surface refrigeration. At the present day few can be found who believe that the entire efficacy of hydrotherapy is due to a mere lowering in temperature, inasmuch as it cannot compete in that way with internal antipyretics of the most modest pretensions. From the statistics of Liebermeister himself, founded on more than 6,000 observations, it is shown that the effect of an immersion in a bath of 20° for fifteen minutes, only led to a fall of 0.46° in males, and 0.35° in females; therefore, the more one is convinced of the necessity for reducing the heat in febrile cases, the more urgent is the need to find agents which can effect it with greater speed and certainty than cold water. "In the pursuit of this idea we are arrested by the glorious name of Lister, for he showed that the most effective

antiseptics are antipyretics also;" and, as carbolic acid was one of the first to be employed by him, the whole of the aromatic series was examined by chemists, and especially the derivatives of benzol in search of it. And in this way synthetic salicylic acid was formed by the combination of phenic and carbonic acids, a discovery which was received with that generous enthusiasm which welcomes every new remedy, and it was soon employed in the treatment of all forms of pyretic disease. Riess, the most fervid supporter of the idea, gave it in his typhoid cases whenever the temperature exceeded 102 degrees, and had the triumph of recording that many passed through the disease with scarcely any elevation of temperature at all; it is true that 26 per cent. died, but that accident did not, of course, invalidate the accuracy of the theory, nor deter him from using other remedies of the same class in similar heroic fashion. He successfully supported his thesis that the rôle of antipyretics is the reduction of temperature, and after all *ἡ ἀρὰ τοῦ πυρετοῦ!*

When the novelty had worn off, there were so many unfavourable reports as to the action of salicylic acid, that it was clear that its admirable effects in acute rheumatism were no evidence of its worth in treating other febrile affections. The induced restlessness, the singing in the ears, the profuse perspiration, and occasional occurrence of collapse, showed the danger of employing it too freely; and the more serious effect was observed that the falling temperature was accompanied by an accelerated pulse, an indication of cardiac failure which excited the gravest apprehension, for, in diseases of long duration, all depends upon the heart power and integrity.

With renewed hope three isomeric dihydroxibenzoles were studied in search of a refrigerant free from these defects, *resorcin*, *hydro-quinina*, and *catequina*; the first, however, was alone available, the two latter being too poisonous for internal use. And resorcin itself was not free from danger. Lichtheim observed amongst his patients, shortly after taking it, vertigo, noises in the ears, suffusion of the face, hurried respiration, with accelerated and intermittent pulse. Then, in about ten or fifteen minutes, a rapid fall in temperature—but with an equally rapid rise to a still higher point a few hours afterwards—the urine became blackened and albuminous, and cerebral disturbance was initiated or exacerbated. It was evident that the lowered temperature was purchased too dearly. Then another group, derived from the decomposition and rebuilding of the molecule of quinine, was examined. *Quinolina* failed utterly, and, although Gerhardt believed it was a specific in diphtheria, is well-nigh forgotten. But *cairina* has been more successful, it will reduce the temperature in any case, but only temporarily, the next day it will be—unless the remedy be repeated—as high as ever; and Guthmann, who praised it enthusiastically, admits that the course and duration of the disease were not in the least affected by it. And with this agent, as before, we find Riess apparently determined to test the utmost endurance of the human organism; for, not satisfied with giving from .5 to 1 gramme every hour, whenever the temperature of his patient exceeded 100° to 102°, even when this necessitated twenty doses in twenty-four hours, he reached at last the enormous dose of 3.5 grammes, and then only withheld its repetition on the appearance of persistent cyanosis, stupor and a pulse of thirty-six per minute. He thought nothing of rigors lasting for more than an hour, of profuse sweating all day, of albuminuria, and that the pulse, when the lowest degree was reached, was often over 100 per minute, and he mentions, with satisfaction, that his delirious patients (to their great credit) exhibited marked "euphoria, manifesting itself sometimes in hallucinations!" Schulz, of Brunswick, was at first alarmed by its coincident effects, the profuse diaphoresis, the state of collapse, the terrible rigors "which shook the bedstead," nevertheless he used it in twenty-one cases, expending 1,017.25 grammes of *cairina*, at a cost of 305 marks (about £17 15s.) What with the profuse sweating, the rigors, epistaxis, collapse, urticaria, vomiting and general misery, the patients, not unnaturally, rather preferred the fever to the remedy. And as relapses occurred in 40 per cent. of the cases, Schulz asks if they were not really due to the action of the *cairina* itself, and very pertinently observes, "does not this induce us to believe in the teleological importance of fever? Supposing that enteric fever is due to a typhoidal bacillus, which an elevated temperature gradually destroys, may we not believe that its reduction, by the use of *cairina*, really favours the vitality and reproduction of the bacilli, and that we are thus arresting the course of a natural remedy, and not only prolonging the disease, but inviting a relapse?"

After Müller had observed, in several cases, coma with incontinence of urine, and other observers had recorded similar evil effects, it was inevitable that this medicine, from which so much had been anticipated, should fall into deserved oblivion. It was succeeded by *talina*, the undoubted antipyretic powers of which were tested on a large scale by Jacksch in the clinic of Nothnagel. In doses of .25 to .75 gramme there was the familiar temporary fall in temperature, with profuse

sweating and rigors, but neither vomiting, cyanosis nor collapse, so it was a decided improvement on the last. *But the course and duration of the attack were not modified in the slightest degree.* In spite of this not inconsiderable defect, yet another was brought into the market, and one which may be called the crowning triumph of the antipyretics—*antipyrina*. Filehne, who was the first to try it, observed, that administered in quantities of five or six grammes, in divided doses, within three hours, the temperature fell to the normal point in from seven to nine hours, that the apyrexia often lasted for twenty hours afterwards, and that the temperature then rose gradually without rigors. Also, that the descent was gradual, without much diaphoresis, and with no collapse, only the pulse did not fall correspondingly. And although some disagreeable effects were not long in showing themselves—urticaria, giddiness, and gastric disturbance—it is evident that we have here an agent which equitively satisfies those who believe that the sole point in the treatment of fever is cooling it. But, alas, the more perfectly the postulates of the apyrexiaists are satisfied, the less satisfactory are the curative results—the patients are effectually cooled, but they are not one whit the better for it; the disease pursues exactly the same course, notwithstanding the refrigeration. Schulz had 40 per cent. of relapses, Eichhorst saw that the worst symptoms persisted under the system, and Freimuth and Poelchen traced the luxuriant growth of spirilli in the blood, in spite of it. Then, is not this question apt to present itself to the impartial observer: If this be the sole result of the modern treatment of fever, have we really gained anything in adopting it?

That a high temperature is necessarily fatal or perilous remains to be proved; it is extremely unlikely that the limits of safety are so narrow above the normal point, when we know that a fall of 10° or 12° is compatible with survival below it, and the more exact clinical observations show that most patients do not die from overheating, but from other causes; it is not the fever but its complications which put an end to existence. Volkmann and others have pointed out that the most fatal diseases may exist with a low temperature—peritonitis, for example—and, on the other hand, that there may be high thermometric readings and no danger.¹ After aseptic operations his patients were feeling quite well, laughing, joking, playing at cards, and eating prodigiously, and it was only by chance that he noted that the axillary reading was often 104°. And, *vice versa*, in the campaign of 1870 Fräntzel saw severe epidemics of typhus, with every pathognomonic symptom, rapid pulse, frightful prostration, furious delirium, and a mortality of 39 per cent., and yet with low temperatures. And in enteric cases Wernich observed that those with the worst results, and especially with brain complications had the least fever. From all this it is evident that the danger of elevated temperature is far from being proved, and that even the old opinion that it was salutary can scarcely be dismissed, now that we know that it is inimical to microbic existence, without more consideration than it has lately received. Naunyn has shown, in an extended series of experiments, that rabbits can endure for weeks together a temperature of 106.2°, with occasional rises to 107.6°, and even to 109.4°, and there is really nothing to *prove*, he says, that the mere heat is dangerous to the human system, but that the heretical dogma might rather be sustained, that fever is, in the face of microbic intoxication, a somewhat beneficent institution for the human race. For the recent observations of Pipping have demonstrated that, although bacilli are not killed by the temperature of pneumonia, that they then at least cease to multiply and flourish (*Deutsche Med. Wochenschrift*, No. 21).

IV.—INTERNATIONAL MEDICAL CONGRESS.

GYNÆCOLOGICAL AND OBSTETRICAL NOTES.

(Communicated.)

(Continued from page 131, March, 1888).

PROFESSOR SIMPSON, Edinburgh, was very prominent, and we fully appreciated the valuable aid he rendered in the section. His method of Obstetrical Nomenclature was favourably received, and I hope it will be permanently and generally adopted. The papers read at the Congress in the sections above mentioned were well sustained even to the last day of meeting, and included the following. From the *Medical Record*, New York, I give you some extracts:

Treatment of Puerperal Eclampsia.—Dr. Ira Oatman (San Francisco) treated this subject. When convulsions occurred before labour he recommended anæsthesia, clearance of the bowels and rectum, together with as rapid delivery as was compatible with the safety of the patient.

¹ I have lately been treating two cases of simple fever, in adolescents, with a temperature of 104—5°, for days together, without any apparent mischief and little distress.—*Trans.*

When the convulsions occurred after delivery, and were accompanied by high, nervous, and vascular tension, nothing was so safe, speedy, and reliable as veratrum viride, in doses of ℥vi. by the mouth, or ℥x. by the rectum, every fifteen minutes, until convulsions ceased.

Should the veratrum cause excessive depression an immediate and certain antidote was found in alcohol. It was better to give the veratrum in excessive doses than to risk the continuance of the convulsions, for brandy or whisky to counteract its effect were always present, and the veratrum certainly exhibited a remedial action not otherwise attainable. The puerperal period was to be treated as usual, together with treatment of any pathological condition present. He found the veratrum equally efficient in the convulsions of children and in hystero-epilepsy.

Dr. Alexander Simpson, of Edinburgh, Scotland, thought any suggestion that would enable us to control eclampsia of extreme value. He would like to hear opinions regarding veratrum; he had used it once twenty years ago, and had not felt inclined to try it again.

Dr. G. Lane Taneyhill, of Baltimore, Md., advocated strongly the use of veratria in eclampsia, and said that fifty per cent. of his cases had, in the last twenty years, been treated by it, he giving ten drops of the tincture, hypodermatically, every hour of convulsive action, and always keeping another hypodermic syringe with brandy to sustain the heart should the pulse go below forty-two. He was led to this practice by observing its use by Latimer in a case which he could control but temporarily by chloroform. He had not lost one case of eclampsia since using veratria; it enabled him to hold the engine (the heart) in check as an engineer with the air-brake, and was not as dangerous a medicine as was generally supposed. It produced the same effect as bleeding, save that no blood was lost to weaken the patient afterwards.

Dr. Duncan C. MacCallum, of Montreal, Canada, had fourteen cases; all recovered. He used chloral, chloroform, potassium bromide, bleeding, morphia hypodermatically, and cleaned out the bowels by stimulating enemata. There was no routine treatment; each case was to be treated on its own merits.

Dr. Pierce, of Ohio, thought it foolish to try to map out any one line of treatment for eclampsia; each case must be rationally treated.

Dr. Lawrence, of Bristol, England, believed in as early delivery as possible, and the use of chloral. In plethora, bleeding was sometimes useful. It was difficult to lay down definite treatment.

Dr. Jones, of Danville, Ill., said that veratrum was an active purgative, and a loaded colon was an active agent in causing epileptiform convulsions. He took charge of his patients beforehand, kept their bowels regular, used chloroform in labour when any nervous symptoms appeared, and saw no cases of eclampsia.

Dr. A. F. A. King, of Washington, D. C., had never used veratria in eclampsia, but had suggested its use twenty years ago theoretically (*New York Medical Journal*, October, 1865), to lessen arterial hyperæmia of the nerve-centres, by reducing the force of the heart. He then, and more recently (in the *American Journal of Obstetrics*, March and April, 1887), considered, and still considers, eclampsia to be caused chiefly (and in addition to uræmic poisoning) by abnormal pressure of the gravid wound upon the aorta and its branches, and vena cava and its branches. He believes this abnormal pressure to be chiefly due to premature descent of the lower uterine segment and foetal head below the brim into the pelvic cavity, especially in primiparæ, two or three months before full term. In transverse presentations, whether in multiparæ or primiparæ, eclampsia does not occur. The head of the child ought not to sink below the pelvic brim before labour—in fact, such descent is the second stage in the mechanism of labour. Yet recent authorities affirm that it is usual, and therefore normal, in primiparæ. This he denied. He maintained that the normal posture of the fetus during pregnancy, before labour begins, is transverse or oblique; a head-presentation is abnormal until the sinking of the womb just before delivery, when it changes in order that labour may take place. To remove the cause of and prevent eclampsia, we should, by posture and manipulation, lift the prematurely descended head out of the pelvis, and put it above the brim in one of the iliac fossiæ, where it normally belongs, and where it would have remained but for corsets, dress, coitus, and other displacing influences.

Dr. W. W. Jaggard, of Chicago, Ill., said: 1. Eclampsia is a symptom of renal insufficiency, renal inadequacy, to use a term of Sir Andrew Clarke's, the result of functional or organic disease. The arguments of Dr. A. F. A. King were entirely inconclusive. 2. The cause of the convulsions were cerebral anæmia, the result of vaso-motor spasm, caused by irritation of the vaso-motor centre, by excrementitious matter retained in the blood. 3. The indication for treatment was absolute continued narcosis. He used chloroform, potassium bromide, chloral, morphine. Veratrum viride, according to the researches of Wood and Behrens, of Philadelphia, causes vaso-motor dilatation, and the woman is literally "bled into her own veins." Pilocarpin is unreliable, causing cardiac depression, and aiding in œdema pulmonum when

no diaphoretic action is effected. Professor Fordyce Barker has frequently called attention to this fact.

Dr. Oatman said that he had seen large doses of as much as a drachm of the fluid extract of veratrum taken by mistake and recovered from without treatment.

Dr. H. O. Marcy, of Boston, Mass., read an elaborate paper on the **Histology and Pathology of Reproduction**.—The studies offered were based upon the conviction that the profession owes to the late Professor Ercolari, of Bologna, the establishment of new and simple truths which are fundamental and of the first importance. Comparative studies teach that there is a unity of type in placental development. The writer endeavoured to show that immediately after conception a destructive process affects the inner surface of the uterus; in some animals and in women this process is limited to the epithelium, while in other animals, as in the rodents, the destruction extends to the entire submucous connective-tissue layer. This destruction is essential, since it facilitates the setting up of neo-formative changes, from which will result the maternal portion of the placenta. This process consists in the formation of new vessels, which are distinguished from the vessels of the unimpregnated uterus in that both the artery and vein consist of only a simple endothelial wall, and that from the external surface of this is elaborated a layer of special cells not separable from the wall of the vessels. These are the so-called decidual or placental cells. The relation established between those two factors of new formation is what is known as placental development. The manner in which this relation is established gives rise to the different forms of the mammalian placenta.

Dr. Alexander Simpson, of Edinburgh, spoke of the value of the paper and sketched the development of the placenta from the lowest type, where the foetal and maternal surfaces were simply laid together, and were separated at parturition, to the complicated interdigitation in the higher animals, and the highest type as found in the human female, where, at the time of delivery, the maternal and foetal portions came away together, leaving beneath it only the basal portion of the uterine mucous membrane.

Dr. E. Paul Sale, of Aberdeen, Miss., read a paper on the **Management of Pregnancy, with Reference to the Prevention of post-partum hæmorrhage**, in which he strongly insisted upon the value of prophylaxis, undertaken months before delivery, during which time the patient should be under the supervision of the accoucheur. Some of the predisposing causes and their treatment are as follows:

1. Hæmophilia, abnormal tenuity of the wall of the capillaries—Use stimulating oils, as turpentine or oleum origanum. Matico, liquid extract, also good. Ergot and allied drugs no value.
2. Anæmia, from various causes—Fluid extract stylohadsis, cimicifuga racemosa, salix nigra, etc. Faradization of the abdominal muscles for ten minutes daily.
3. Atonic debility, from rapid childbearing—Exercise, tonics, quinine, strychnia, iron, fresh air.
4. Laceration of cervix, cancer, fibroma—Let alone, except before third month.
5. Intemperance—Moral measures (what success?).
6. Heart disease—Gelsemium.
7. Plethora—Dietetics, salines.

Dr. H. B. Hemenway, of Kalamozoo, Mich., had not been able to diagnose *post-partum hæmorrhage* many months before labour. He asked what was the relation of late ligation of the cord to *post-partum hæmorrhage*. He strongly suspected that it tended to prevent such an occurrence, and his explanation was as follows:—There is no direct connection between the maternal blood-vessels and the placenta; if the cord is ligated late, or if only the foetal portion were ligated, blood flows from the placenta. The cord is normally attached near the centre of the placenta; if then, blood is extracted, the placenta must shrink and the edge will first become detached. If blood is not extracted from the placenta, it is more rigid, and as the uterus contracts the centre is likely to be first detached. A sack is thus formed which fills with the maternal blood, and the mouths of the uterine vessels do not firmly close. When the placenta is delivered, this accumulated blood rushes out and the maternal vessels again bleed.

Dr. W. W. Jaggard, of Chicago, calls attention to the following propositions:—

1. Late ligation of the cord is always indicated in the interest of the child—when not contra-indicated in the concrete case. The researches of Budin have demonstrated that when the cord is ligatured, when it ceases to pulsate, the child receives seventy-five grammes of blood—lost when the pulsating cord is tied. The relation of late ligation of the cord to the prevention of *post-partum hæmorrhage*, to which the gentleman from Michigan has called attention, is of great interest, if it be a fact.
2. The best prevention of *post-partum hæmorrhage* is to secure retraction of the uterus, by keeping the hand on the fundus uteri from

the moment the child begins to pass through the vulvar outlet until the muscular fibres have rearranged themselves—about one hour after expulsion of the placenta. Kucher, in his admirable book, has called attention to friction over the fundus twice daily during the first two days of the puerperium. This is the practice in Vienna. There is little danger of dislodgement of a clot in the uterine sinuses, or interruption of the process of puerperal thrombosis, by this procedure. It is also an excellent prophylactic against resorption of septic matter.

Dr. George Wheeler Jones, of Danville, Ill., read a paper on **Dystocia from Rigidity of the Cervix and its Management.**—After a consideration of the various conditions which might cause rigidity of the cervix, he spoke of the most important—spasmodic contraction—Here opium was most valuable, together with chloroform and Barnes' dilators, if quick dilatation was necessary. Sitz baths, warm vaginal douches, delivery in a warm room, morphia hypodermically, quinine where there was malaria, salicine in rheumatic cases, and electricity were all useful. He would never use chloral, as it was dangerous to mother and child. He then detailed some original investigations into the medicinal action of gassypii radix, delphinium, and ipecacuanha.

Dr. A. F. A. King, of Washington, D.C., called attention to the fact that the thinning of the uterine segment and the obliteration of the cervical canal, conditions which led to the rigidity of the cervix, were abnormalities. When the uterus and child maintained during pregnancy their normal lateral obliquity, the canal of the cervix from the external to the internal os will remain unobliterated until full term, which is the normal condition both for primiparae and multiparae. Under the same normal circumstances the great thinning of the lower uterine segment, the tearing of the decidua mucosa membrane, the "formation of a new cervical canal," and the other tissue-changes observed by Bandl, will be absent during pregnancy. They are abnormal. They may nevertheless occur during labour from abnormal mechanical obstruction to delivery. Dr. King also objected to the use of chloral.

Dr. Brooks H. Wells of New York, did not agree with Dr. Jones concerning the great danger to the unborn child from the use of chloral. In about one hundred cases out of between six and seven hundred which he had had under his charge, or had witnessed, it had been used both as an anæsthetic, where the first stage had been unusually painful, and in spasmodic rigidity of the cervix, and in no case had he seen any harm accrue to mother or child, but only the most gratifying results. He always used the precautionary measure mentioned by Dr. Jaggard, viz., to keep himself informed of the condition of the uterus by a hand placed over the fundus, slight rotary friction overcoming any possible tendency to relaxation, and had never had any serious post-partum bleeding, either with or without the use of chloral. Its administration might, in full doses, blunt the pains somewhat. He was accustomed to administer the drug in ten to fifteen grain doses, by mouth or rectum, until this result was attained—usually from two to three doses. He considered morphia and the hot douche important agents in treating the class of cases mentioned.

A paper by Dr. John H. Wilson, of Chicago, Ill., entitled "Puerperal Uræmic Amaurosis," was read by title.

The section then adjourned, after passing a vote of thanks to Professor Simpson for the felicitous and able manner in which he had presided.

Dr. Henry O. Marcy, of Boston, the President of the section, read a paper on the **Histology and Surgical Treatment of Uterine Myoma.**—The author presented an interesting array of micro-photographs. He showed the multilobular growth, the capsule the multilobular growth, and the parts at which they lie in juxtaposition; the histological relation of the growth to the uterus; the vascularization; the first injection they were able to make into a fibroid tumour; and discussed the bacilli discovered by Dr. Nelson, of Boston, which he termed bacillus Nelsonii. He showed a number of other cuts, and the specimen of a tumour which he had removed from a woman per vaginam, but which he would not attempt again, on account of its size; exhibited some instruments for the operation of removal of fibroid tumours, of his invention, and discussed the shoemaker's stitch. Illustrations were thrown on the screen by Drs. Martin, Clark, Nelson, and Hewson.

Dr. Caleb R. Reed, of Middleport, O., read a paper on **Intra-Uterine Stem Pessaries**, in which he favoured very much their use for promoting the flow of the menses in cases of local origin, and especially those where there was an ill-developed uterus. He thought that this instrument should come in the list of emmenagogues, and that it should not be condemned with the arrogance which generally accompanies its discussion.

Dr. Daniel T. Nelson, of Chicago, read a paper on the **Treatment of Uterine Myoma, by means of Ergot.**—The author had gone to

much pains to gather statistics from the profession, and made a good argument for this mode of treatment.

A paper by Dr. M. D. Spanton, of Hanley, England, was read by Dr. Eddowes, of Salop, England, on the subject of **Cystitis in Woman.**—Local conditions leading to cystitis in woman, among which are enumerated diseased states of the uterine appendages, bands of adhesions dragging upon the bladder, and some of the affections causing obstruction to the passage of the uterine, which are often obscure and trivial in themselves, are not infrequently overlooked.

Dr. William L. Reid, of Glasgow, Scotland, read a paper on the **Remote Results of Shortening the Round Ligaments.**—He had performed the operation eighteen times. He gave the opinions of the authorities, mostly British, and which were mostly unfavourable to the operation. The discussion which followed this paper was also rather unfavourable to the operation.

Dr. J. H. Kellogg of Battle Creek, Mich., read a paper on **Alexander's Operation**, and reported twenty cases. He favoured the operation.

Dr. W. C. Wade, of Holly, Mich., read a paper on **Displacements of the Uterus**, his paper consisting of thirty-nine terse statements about displacements.

Dr. Joseph Taber Johnston, of Washington, D. C., read a paper on **The Treatment of Commencing or Threatened Peritonitis by Brisk Purgation.**

Professor Vulliett, of Geneva, Switzerland, had two papers, "Progressive Uterine Dilatation" and "The Buried Suture with Iodized Silk in Vesico-vaginal Fistula." They were read in English by Professor Cordes, of Geneva.

Dr. Addinell Hewson, of Philadelphia, Pa., read a paper on **Abdominal Surgery.**

Dr. E. H. Tredholme, of Montreal, Canada, read a paper on "Extirpation of the Uterus for Bleeding Myoma."

A number of papers were read by title and the Section adjourned.

V.—SELECTIONS FROM ITALIAN JOURNALS.

By H. HANDFORD, M.D.

Rivista Internazionale, April, 1887. Pitres e Vaillard. **Neuritis, caused by the Injection of Ether in proximity to the Nerve Trunks of the Limbs.**—For a long time ether has been used subcutaneously as a rapidly-acting stimulant in emergencies; and, usually, if it does not result in as much benefit as one would hope or expect, at any rate, it does no harm. But in a certain number of cases, already sufficiently numerous, it has been followed by cutaneous anæsthesia and persisting motor paralysis, as well as marked trophic disturbances. Some experiments carried out in 1877 by Ocounkoff have clearly shown that this paralysis is due to a neuritis. If half a cubic centimetre of ether is injected deeply into the cellular tissue, between the inner and outer muscular masses on the back of the thigh of a rabbit, motor and sensory paralysis in the portion of the limb below the point of injection follows at once. The greater part of the muscles of the leg and foot are paralyzed, so that in walking the limb is dragged along as an inert mass. Trophic changes soon follow, and are indicated by oedema, ulceration of the foot and toes, and falling off of the nails. The anæsthesia and the motor paralysis comes on at once, and persists, with little or no alteration, for several weeks or months. The symptoms thus produced so closely resemble in their nature and distribution those following section of the nerve, that one is led to suppose that the ether exercises a local destructive influence on the nerve trunk. On examination of the nerve itself it is found that this is so. Above the point of injection the nerve undergoes no change. At the point of injection the changes are very marked, but vary according to the length of time that has elapsed since the injury. They are essentially destructive in character, and are indicated by breaking up and absorption of the white substance of Schwann and disappearance of many of the axial cylinders. Below, there is typical Wallerian degeneration. The practical outcome of this is that in injecting ether the neighbourhood of the nerve trunks should be avoided, and that the injection should be into the subcutaneous tissue, and not deep.

Mikulicz. **The Surgical Treatment of Stenosis of the Pylorus.**—Without being aware of the plan adopted by Heinecke, the author recently operated on a case of cicatricial contraction of the pylorus. At first the result appeared likely to be favourable, but after three days the patient died. The cause of death was frequent hæmorrhage, which came from an ulcer involving the pancreas. This was touched by the thermo-cautery, but without stopping the hæmorrhage. Resection could not have been practised in this case, because it would have been necessary to have taken away a portion of the pancreas, and gastro-enterostomy would have left the bleeding point untouched.

Kümmel. The Treatment of Tubercular Peritonitis by Laparotomy.—The author reviews this operation from the first case where Sir Spencer Wells, through an error in diagnosis, performed laparotomy for tubercular ascites, with the result of curing the patient, up to the present time. Including two cases of his own, of which he gives some particulars, he analyses thirty cases operated on by various surgeons. In more than twenty-five there was more or less improvement, which in some cases was permanent.

Lo Sperimentale, December, 1887. **Piperno. Laparotomy in a New-born Infant.**—The author was called to see a new-born male child with an incomplete development of the abdominal parietes. There was an oval opening, about two and a half inches in its long diameter, to the margins of which the umbilical cord was attached, forming an inverted funnel. Into this the intestines escaped, covered only by a thin layer of peritoneum. It was clearly impossible to expect to treat this hernial protrusion successfully by any kind of protective apparatus. It was also evident that in its then condition the child could not live; and, as it was otherwise well formed, the author, yielding to the entreaties of the parents, determined to operate, notwithstanding the apparently poor chance of success. Accordingly, at eight o'clock in the evening, using full antiseptic precautions, the margins of the opening were "refreshed," any vessels being tied before being cut, because of the importance of keeping the loss of blood as small as possible. Unfortunately, while the sutures were being put in, the child began to cry, and the peritoneum gave way, allowing the intestines to escape. This rendered the operation both more serious and more difficult. The intestines were wrapped in a flannel wrung out of a warm one and a half per cent. carbolic solution, and were eventually returned into the abdominal cavity. The wound was closed, and a Listerian dressing applied. The child was much chilled during the operation, which was performed in the month of December, in a country cottage. Warm applications were ordered. Next morning the child had passed urine, and was in good condition. The temperature in the rectum was 98.6. In the evening, as the bowels had not been moved, an enema was given, which was followed by a natural motion. The temperature remained normal till about midnight, when it rapidly fell, and death took place. Unfortunately, the friends would not permit any *post-mortem* examination to be made, so that whether death was due to shock or to peritonitis was not ascertained.

Riforma Medica, vol. 4. **Lamperties. On the Parasitic Nature of Cancerous Tumours.**—Experiments were made with twenty-eight tumours: two encephaloid, five epithelioma, four scirrhus, one adenoma, four sarcoma, two villous cancer, seven fibroma, and five lipoma. Tubes of agar-agar and of gelatine were inoculated, and kept some at a variable temperature, and some at a fixed temperature. Those inoculated from encephaloid, epithelioma, scirrhus, sarcoma, and villous cancer, produced rounded colonies of bacilli in from two to ten days. The bacilli from encephaloid developed most rapidly. The blood of a patient suffering from an encephaloid tumour also gave rise to colonies identical with those inoculated from the growth. The blood in cases of epithelioma gave negative results.

Gazz. degli Spedali, December, 1887. **Whitehouse. A case of Poisoning by Antipyrine.**—The author gave seven and a half grains of antipyrine in a drachm of syrup to a young child. In two or three minutes the child was taken with severe pain in the bowels, so that it constantly rolled and twisted about. In a short time a copious eruption of urticaria came out, and considerably increased the child's discomfort. Vomiting was excited by warm water and by tickling the pharynx, but the child remained in great danger. Fortunately, the author recollected the antagonistic action of atropia, and gave a subcutaneous injection of gr. $\frac{1}{10}$. This was followed by the best results, and the child was soon relieved and free from danger.

Orlowski. Extirpation of the Spleen.—This, says the author, brings the number of operations for the removal of the spleen already published up to thirty-nine. Of nineteen cases for leucocythæmia, only one survived. Of the remainder, nineteen were removed for chronic enlargement, and one for sarcoma. Of these twenty cases, seven died and thirteen recovered. The most serious difficulty in these operations consists in the adhesions to the diaphragm, and the consequent hæmorrhage in separating them. The best way of avoiding this is to leave a portion of the capsule of the spleen adherent to the diaphragm, and if necessary, some of the splenic substance also. Orlowski's patient was a lady, aged thirty-six, who had borne three children. There had been a large, hard, indolent abdominal tumour since early childhood. In April, 1885, ascites developed and rapidly increased. The patient was tapped, and a large quantity of clear thin fluid removed. Then the greatly enlarged, indurated, but movable spleen could be felt. At the end of June the operation of splenectomy was performed. The spleen was adherent to the omentum, which was

divided between double ligatures. In separating the adhesions to the diaphragm three vessels had to be tied. The pedicle was treated with a wire clamp, after the method of Cintrat, and was fixed to the abdominal wound. The patient died on the fifth day after the operation, and no *post-mortem* could be obtained. The spleen measured thirty centimetres in length and eighteen centimetres in breadth.

VI.—SURGERY.

DERMEPENTHESIS, OR ANIMAL SKIN-GRAFTING.

By G. CADOGAN-MASTERMAN, M.D.

It is to be regretted that the practice of skin-grafting, which gives such excellent results, should be attended with so many inconveniences. The donor, as I have often personally experienced, finds the momentary "snip" rather painful, and the little sores are some days in healing. A sensitive patient does not like giving the grafts himself, and his friends, although eager enough to provide them the first time, are seldom willing to repeat the donation, and there is the danger if alien skin be used of conveying local or even constitutional disease. And if the surface to be covered be large, the process is extremely tedious, and often disappointing. Frog's skin has been used as a substitute, but these amphibians are so repulsive to most people, and especially so to women and children, that after two trials I gave it up, and the more so because it utterly failed in both cases, and sought for some other source which would avoid the inconveniences, and yet be generally available, and I believe I have found it in the skin of the rabbit. And as the term human or rabbit skin-grafting is somewhat awkward, I would suggest the substitution of the above, from *Δέρμα* and *ἐκτένσις*.

I tried this plan for the first time in January, 1885, when I had two large superficial wounds to cover, and the patient himself was so unwilling to furnish the grafts, and his household, after a few experiences, so stoutly refused to contribute any more, that I was forced either to trust to the slow process of granulation, and probable contraction, or to find a more manageable supply, and a young wild rabbit I saw in the kitchen suggested its possible source. The case itself was a singular one:—A young farmer was riding home from market, at a smart pace, on a restive horse one dark November evening; he was on his wrong side, and at a turn in the road came into collision with a cart going in the opposite direction. The point of the near shaft struck him on the inner side of the left thigh, nearly transfixing it, and then, as he fell from the saddle, ripped it open as far as the groin. After a few minutes' confusion he was helped on his horse again, and accompanied by a passing tramp rode slowly about a mile home, fully convinced, he told me, that his belly and not his thigh had been torn open. I saw him shortly afterwards: there was a ragged, lacerated wound, extending from the middle of the thigh to Poupart's ligament, filled by a mass which I found to be a portion of his woollen drawers, about three inches of the centre of the *sartorius* muscle and blood clot; the two former had been driven through a rent in the *adductor longus*, and formed a large swelling at the back of the limb. On clearing this away the femoral sheath was found bared for three inches; it had escaped being torn by a miracle. Healing went on rapidly; but a large piece of integument sloughed away anteriorly, and still more at the back, and left the surfaces I had to cover, and did cover most successfully.

The second case was an ordinary one of an ulcerated leg, in which the plan again answered very well. But the third was somewhat unusual:—A middle-aged tradesman who had been drinking to slight excess for some years, came to me with recent traumatic orchitis. The pain and swelling were excessive, so morphia was given, three leeches applied, and an ice-bag. In the night acute *delirium tremens* developed, and when violently struggling to escape from the grasp of two neighbours who were trying to keep him in bed, the swollen scrotum was severely bruised—I think knelt upon—by one of the men. The next morning it was black and cold. Poultices were applied, and so on, but in a day or two the whole of the integument sloughed away from the root of the penis to the perinæum, leaving the pouch of the testicles exposed, and covered only by the pale pink lattice of the *cremaster* muscle. When the wound had been cleaned, there was a border of but half an inch wide of the scrotum left in a healthy condition, and the case was complicated by the extremely bad state of the patient's health generally, and extensive bed sores. I found, however, that a circular piece of skin, two inches in diameter, would just cover the testicles; and, with little hope of success, again tried the rabbit as its source. A young one was procured, the area marked out with ink on its previously-clipped abdomen, the animal killed by a blow on its neck, and the piece of skin rapidly dissected off and applied on the clean wound surface, pressed closely down, covered with a piece of lint dipped in hot water, and then with a fair-sized linseed-meal poultice. The latter was in turn kept hot without removal by an india-rubber hot-water bag, which was frequently emptied

and refilled. At the end of forty-eight hours the transferred skin was cautiously examined, and found to be adherent. A fresh poultice was applied and reinforced as before for three days longer, when the outer layer came away with the fur, leaving a firm, smooth integument, looking more like the mucous lining of the lips than ordinary skin, and when I last saw it in May, 1886, so it remained.

The fourth case was an unhealthy ulcer after a very tedious illness, *morbus coxae*, and therein after many trials with rabbits of all kinds and ages, the plan failed utterly.

The last in which I have had an opportunity for trying it was a terrible burn, which destroyed the skin, and in places the superficial fascia over the back, arms and thighs of a child of five years. The admirable carbonate of soda treatment relieved the pain like a charm, and, as fast as I could get portions of the wound clean, pieces of rabbits' skin, about the size of a shilling, were inserted, and two-thirds at least adhered. The poor child was under every disadvantage except plenty of fresh air, and, when more than half the surface was covered, unfortunately died from peritonitis (August 1st, 1887) three months after the accident. It was most interesting in this sad case to compare the rapidity with which the wound was covered artificially with the slow process of natural growth from its margin.

In order to ensure success, some precautions must be used: I found young wild rabbits by far the best; their skin is very thin, it separates readily, and there is no fat. Only a small piece, at least with one pair of hands, can usually be taken from each, for, although the animal is quickly killed in the customary manner by a sharp blow at the back of the neck before removing the skin, this must obviously be alive to be of any substitutional value. If it were not for an obstructive Act the best plan would be to chloroform the animal, dissect away as much skin in successive portions as one needed, and then kill it before it recovered consciousness. I have not tried the alternative, but I dare say the skin of the common cavy would answer as well if the now useless little beast could be killed as instantaneously as the other rodent, or were anæstheticized under licence.

The wound must be healthy and perfectly clean; dilute nitric acid lotion is, I think, the best preparative. The instruments must be sterilized—I prefer by dipping the blades into caustic potash solution, and then rinsing in recently boiled water. Not a moment must be lost in the transference, and the graft must be kept moist, not sodden, thoroughly warm, under gentle equable pressure, and not disturbed for forty-eight hours. There is no need to remove the fur, it came away in every case within a few days.

The term I suggest is, if inexact, at least unobjectionable.¹ The transferred skin can hardly be said to be engrafted or to grow; the surface layers, epithelial as well as dermal, obviously do not, but possibly the superficial fascia may do so; but I consider that it acts by influence rather than substitution, in some way so coercing the errant granulation cells, that instead of degenerating into pus, they coalesce into integument under the smooth, soft, and possibly still living shield. I noticed in many patches that the newly-formed skin was sensibly depressed below the level of the surrounding granulations, as if the growth of the latter had been checked, and their apices flattened into a continuous layer. Prolongations of new skin could often be seen starting from the limb of the circles, but they were never so marked nor so vigorous as from grafts of human source, although often sufficiently so to bridge over the space between two neighbouring discs very rapidly.

The advantages of this modification of M. Reverdin's plan of skin-grafting introduced, I believe, in 1869, are: That the patient is spared all pain himself as well as seeing it inflicted upon others; that in place of minute centres of new growth being established, surfaces up to at least two inches in diameter may be covered at once; that in the case of burns this rapid tegumentation not only prevents much suffering but greatly reduces the probability of subsequent contraction; that alien skin may be unhesitatingly employed: and that the duration of healing is reduced to a minimum.

With only four successful cases, its value is, of course, still problematical; but the results, so far, have been so encouraging, that I trust the plan may be worth the trying on a larger scale than the opportunities of private practice have afforded me.

VII.—DISEASES OF THE SKIN.

Formulæ abstracted from advanced sheets of "A Practical Treatise on Diseases of the Skin," by John V. Shoemaker, A.M., M.D. Appleton and Co., New York.

¹ The word should properly be dermatopenthesis, but I think the contraction is convenient, and I hope permissible.

INTERNAL.

BITES AND STINGS OF INSECTS.

Take of Oil of sassafras 2 drachms.

Dose: two to ten drops on sugar or in syrup every two to four hours.

CARBUNCULUS—CARBUNCLE.

Take of Carbonate of ammonium 2½ drachms.

Fluid extract of coffee ½ ounce.

Syrup 4 ounces.

Dose: one or two teaspoonfuls every two or three hours.

CARBUNCULUS—CARBUNCLE.

Take of Antipyrine 200 grains.

Make into twenty powders.

Dose: one powder in water every one or two hours.

CARBUNCULUS—CARBUNCLE.

Take of Sulphate of quinia 30 grains.

Sulphide of calcium 10 grains.

Mix and divide into twenty pills.

Dose: one or two pills every three or four hours.

CARBUNCULUS—CARBUNCLE.

Take of Tincture of chloride of iron 1½ ounces.

Glycerin 1½ ounces.

Sulphate of quinia 1 drachm.

Mix. Dose: one teaspoonful in water every two or three hours.

COMEDA—SEBACEOUS PLUG OR GRUB.

Take of Dialyzed iron 1 ounce.

Glycerin 2 ounces.

Castor-oil 2 ounces.

Mix. Dose: one to two teaspoonfuls night and morning.

COMEDO—SEBACEOUS PLUG OR GRUB.

Take of Cod-liver oil ½ ounce.

Sulphuric ether 20 drops.

Mix. One dose: to be taken three times a day.

CHANCROID.

Take of Syrup of iodide of iron 1 ounce.

Chlorate of potassium 2½ drachms.

Glycerin 2 ounces.

Water 1 ounce.

Mix. Dose: one to two teaspoonfuls every two or three hours.

CHANCROID.

Take of Tartrate of iron and potassium 4 drachms.

Aromatic spirit of ammonia 2 drachms.

Water 3 ounces.

Mix. Dose: one teaspoonful in water every three hours.

CHANCROID.

Take of Sulphate of quinia 30 grains.

Compound powder of ipecacuanha .. 30 grains.

Mix and divide into thirty pills.

Dose: Two pills every two or three hours.

DERMATALGIA—NEURALGIA OF THE SKIN.

Take of Fluid extract of gelsemium 2 drachms.

Dose: two to five drops in water every three or four hours.

DERMATALGIA—NEURALGIA OF THE SKIN.

Take of Croton Chloral hydrate 36 grains.

Glycerite of tragacanth a sufficient quantity.

Mix and divide into twelve pills.

Dose: one pill every two or three hours.

ECZEMA, ACUTE.

Take of Tincture of aconite root 2 drachms.

Water 6 drachms.

Mix. Dose: four to eight drops every hour or two.

The Treatment of Acne.—Lassar (*Therap. Mntshft.*, No. 1, 1888) recommends for all forms of acne the following paste:

Naphthol 10 parts.

Precipitated sulphur 50 "

Vaseline or lanoline } each 25 "

Green soap

This is to be spread upon the skin to the thickness of the back of a knife-blade, and left on for fifteen or twenty minutes, when it will cause a little burning. It is then to be wiped off with a soft cloth, and the

skin powdered with talc. The skin soon becomes inflamed, then turns brown, and finally peels off. The desquamation can be hastened by the application of Lassar's paste with two per cent. of salicylic acid. When the desquamation has ceased, the acne will be found to be greatly benefited.

Treatment of Secondary Syphilitic Baldness.—This affection is characterised by an extensive and persistent loss of hair from the scalp, eyebrows and eyelids, independent of any eruption of the skin, and distinct from the tertiary syphilitic alopecia resulting from cicatrization of ulcerations. It may be successfully treated by the topical application of the following ointment:

Rx.—Hydrargyri iodidi rubri.....gr. v.
 Attar rosæ.....mij.
 Ol. amygdalæ.....mij.
 Unguenti simplicis.....3j.—M.

For the eyebrows and eyelids, where the skin is more sensitive, the mercury should be reduced to one half the quantity. This treatment is usually satisfactory, after about a month's trial.—*Pacific Medical Record*.

Pruritus of the Anus.—This troublesome affection has been found by Bangs (*New York Medical Monthly*) to be due in some cases to irritation in the genital organs, as by stricture of the urethra, or by acute or chronic enlargement of the prostate, and he has succeeded in curing the pruritus by curing the source of irritation. In one case, occurring with acute prostatitis, the intense itching was cured by hot water rectal injections. In another case of intense pruritus, which had resisted all attempts at relief, a very sensitive condition of the urethra was found, dependent upon prolonged sexual intercourse. The patient was cured by the passage of a sound, and by correcting his bad sexual habit. Several other interesting cases are reported, all illustrating the connection in some cases between the itching of the skin and irritation in the genital tract.

Paraldehyde Vehicle.—The following is recommended by Dr. R. G. Eccles:

Rx.—Paraldehyde
 Almond oil.....āā 3ij.
 Chloroform.....m x.
 Oil cinnamon.....mij.—M.
 Sig.—Half to be taken at bedtime.

Iodine in Enlarged Glands.—The following has been found of decided value in the treatment of swollen glands:

Rx.—Tr. iodi.....3ij.
 Oleum lanæ.....3ij.—M.
 Sig.—Rub in over affected parts.—*Medical Summary*.

Multiple Neuritis as a Sequel of Erysipelas. By W. Browning, M.D., Brooklyn (*The Brooklyn Medical Journal*, vol. i., No. 1, January, 1888).—Dr. Browning, enumerating the various causes that have been assigned for multiple neuritis, points out that erysipelas is not among them, at the same time that he relates two cases in illustration of his view of erysipelas as a cause. The first case is that of a German woman, aged sixty-seven years, who in March last was attacked by erysipelas of the head and face. In about a week or ten days after this had subsided, she began to have indefinite pains in her limbs. At this time she could stand, with assistance, unsteadily, and under great distress. Knee-jerk was absent on both sides, as was also plantar reflex. No faradaic reaction. The affection soon extended to the upper extremities. The temperature ranged from 100 $\frac{3}{4}$ ° to 101 $\frac{3}{4}$ °. She was sleepless; narcotics were of no avail. For a few days in May she improved, but suffered a relapse. Some degree of mental feebleness became manifest, with insomnia, restlessness, despondency, loss of memory, and delirium. At the date of the last report (September 24th) the patient continued in much the same condition. The other case was that of a locomotive engineer, aged thirty-three, who suffered from erysipelas of the arm, after a burn. After the wound had healed, and the patient had returned to his work, he found the use of his hand impaired, so that he could not fully extend the fingers, nor flex the thumb on the palm, and considerable atrophy of the muscles of the forearm ensued. This state of the limb had continued up to October in last year.

The Spirit of the Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY, February 28th. There was an excellent discussion On the Radical Cure of Hydrocele, with Notes of Two Cases of Excision of the Tunica Vaginalis followed by Recurrence of the Hydrocele.—Mr. HENRY MORRIS

described the methods of treatment by injections, tents, setons, caustics, incision and excision. His conclusion that there did not seem much difference between injection and incision, or excision, in the duration, treatment, or the certainty of result, is one that will be shared in by most surgeons.—Mr. POLLOCK, president, said that hydrocele was very capricious, and he had known of a case where there had been no recurrence after one tapping, whilst cases that had been treated surgically by injection and by incision recurred.—Sir JOSEPH FAYRER gave his Indian experiences where hydrocele was common. He favoured the treatment by tincture of iodine undiluted, two drachms, as the cure for simple hydroceles. For a certain class of cases excision was necessary.—Mr. WILLETT related a case where two drachms of the undiluted tincture of iodine had been injected with only temporary relief, the fluid returning. Mr. Bryant said he generally used two drachms of an equal mixture of tinct. and liquor iodine undiluted, but no fluid should be left in the sac, and he had very few failures under this plan. Mr. Bryant said that excision was useful in certain cases, but he certainly did not favour it as a general plan.—Mr. TREVES used Curling's solution of iodine, two drachms. In tracing the subsequent history of the cases he found a recurrence in at least twenty-five per cent.; but he also found that after incision and excision there was the same percentage of failures.—Mr. WALSHAM had failures after the injection of the undiluted tincture of iodine. Radical operation seemed to be too serious for working men, who could be tapped without risk every six months.—The conclusion to be drawn from this discussion is that there is no safe radical cure for hydrocele.

ROYAL ACADEMY OF MEDICINE, IRELAND.—At a meeting of this Society Dr. SMITH read the report of the Rotunda Hospital, Dublin, for 1887. The hospital is advancing on the new lines of teaching, and since a gynaecological ward has been opened it has added to its usefulness. The gynaecological wards contain thirty beds. Four hundred and fifty patients were received during the year, being an increase of 106 over the previous twelve months. It was remarkable that retro-uterine hæmatocele occurred eight times, carcinoma thirty, and serious tubal disease only once. All the cases of carcinoma were too far advanced on admission into hospital to justify any radical operation. Nothing was left to be done except to palliate by thorough curetting down to the muscular coat of the uterus, and injecting equal parts of the liniment and tincture of iodine. Abdominal sections were performed eight times for the removal of ovarian tumours, once for the removal of a double ovarian abscess, and once in a case of peritonitis, which proved carcinomatous, making in all fourteen, with four deaths. The uterus was curetted 105 times, including incomplete abortions (18), carcinoma (30), and endometritis (57), without any reaction following, showing that when properly performed this operation was entirely without danger. The bimanual method of examination was practised and taught, with the patient in the dorsal position on a Schroeder chair. The uterine sound has been found most useful during the year as an aid in diagnosing many diseases of the endometrium. It detected with accuracy the patulous condition of the internal os, whether the mucous membrane were hyper-sensitive, thickened, or roughened, and it would demonstrate its tendency to hæmorrhage if that condition were present. Schulby's pelvic diagrams were used to encourage accuracy of diagnosis, and Wyder's transparent plates for illustrations of pathological conditions. Antiseptic solutions were only employed where the hands or instruments had been engaged in septic cases. The stages of disinfection practised were: For the hands, (1) thorough scrubbing for a couple of minutes with carbolic soap and a nail brush in a five per cent. carbolic solution; (2) rinsing in carbolic solution; (3) soaking for one minute in corrosive sublimate solution, 1 in 500. All instruments were disinfected by boiling in a five per cent. carbolic solution. For some time past ordinary Varty water had been employed for the usual operations about the uterus and the vagina, and as good results had been obtained as when solutions of carbolic acid or corrosive sublimate had been used for the purpose.

LEEDS AND WEST RIDING MEDICAL CHIRURGICAL SOCIETY, February 17th, 1888, Dr. BELL (Bradford) brought forward the very important subject of the prevention of ophthalmia neonatorum. The Committee of the Eye and Ear Hospital supply the registrar of births with slips of paper on which are printed directions on the washing of the eyes of the newly-born. These slips are given to persons registering births. The total cost for the Bradford district did not exceed thirty shillings. If this system were adopted over all England the cost of the slips would not amount to more than £30. If it be true, seventy-two per cent. of the blind in England owe their sad condition to this preventable cause, then the Government ought in duty to take into their own hands the printing and distribution of these slips. Meantime

waiting for Government action, medical officers connected with eye institutions might adopt this system in vogue in Bradford, and thereby contribute most effectually to the prevention of what is one of the saddest afflictions.

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OBSTETRICAL SOCIETY OF LONDON, March 7th.—At a meeting of the above society Dr. BOXALL read a paper *On Scarlatina during Pregnancy and in the Puerperal State*.—Dr. Boxall gave a brief summary of sixteen cases of undoubted scarlatina, and pointed out that in one case only were the scarlatinal manifestations associated with signs of septic poisoning. Forty lying-in patients were known to have been exposed to one or more of the above cases of scarlatina. This series is presented in a tabular form, giving the time and duration of exposure and the course of the puerperium. On this evidence it was apparent that such exposure resulted in no detriment to the puerperium. As it might be urged that the 300 patients or more admitted during the prevalence of scarlatina were to a greater or less extent exposed, a chart (together with the percentage tables from which it was constructed) is also appended. This indicated the morbidity (as judged by the temperature) prevailing not only during the whole scarlatinal period, but included, in addition, the three months which preceded the outbreak. From this it was evident that the prevalence of scarlatina in the hospital exerted no appreciable effect on other cases lying-in during the same period. The special value of local antiseptic measures in scarlatina during the lying-in period was discussed. The following conclusions were offered: 1. That infection by the poison of scarlatina *generally* produced in the puerpera a disease which presents *for the most part* the usual symptoms of scarlatina, and runs the ordinary course of the disease without the appearance of septic manifestations. 2. That the disease, in addition to the usual symptoms of scarlatina (to a certain extent modified), may *occasionally* present signs of septic poisoning; that, when present at the onset of the disease, pelvic inflammation and septicæmia may usually be regarded as accidental complications, but, at a later stage, such signs may be the expression of a septic process analogous to the secondary throat of ordinary scarlatina. 3. That *in rare instances* the disease may assume a masked form, in which the ordinary signs of scarlatina are absent, or so slight and evanescent as to escape observation; and that, in some such cases, the only manifestation of the illness may be found in signs usually referred to septic poisoning.

After referring in very brief terms to remedial measures, the author discussed the means which should be adopted to prevent the spread of scarlatina to pregnant and parturient women. He pointed out the advisability on the one hand of isolating all scarlatinal cases and disinfecting all contaminated articles, and on the other of shielding pregnant and parturient women from the many risks of scarlatinal infection which surround them, and, when possible, of removing such patients from any district in which the disease was prevalent. The influence of a third person as a vehicle of infection was discussed with special reference to the conditions under which it was likely to be exercised, and, finally, the measures which might be adopted to counteract that influence, were pointed out. He concluded finally, "that, as the poison might be carried not only directly by the hands, but also indirectly by the clothes and general surface of the body, and possibly by the breath, and subsequently given off into the atmosphere (from which it is inhaled by the patient); thorough washing and disinfection of the hands was not sufficient to insure protection, but that a disinfectant bath, a complete change of clothing, and active out-door exercise, should be also included in the necessary precautions, and that these measures should be adopted not only by the doctor, but also by all other persons who have been brought into contact with scarlatinal poison, and especially by the nurse, prior to attending on lying-in women or even visiting a patient who is advanced in pregnancy." Dr. Boxall's papers were accompanied by diagrams and tables, and this paper was the final one of a series.

Dr. DOLAN (Halifax) said that after twenty years' general practice, and after attending some thousands of confinements, he could not agree with the conclusions as to the personal treatment required by the medical attendant. Under the ordinary conditions of practice it would be impossible to carry out Dr. Boxall's recommendations. From personal experience he found that, contrary to the preconceived opinion, puerperal women did not contract scarlatina, even though exposed to the danger. In the homes of the working classes women were continually exposed. The puerperal death-rate did not rise in Halifax during scarlatinal epidemics. If medical men carried contagion they would be a danger to society, and if puerperal women so readily contracted scarlatina the only way out of the difficulty would be to establish two distinct classes of practitioners—one to attend labours only, and the other to attend cases of scarlatina. Under existing conditions, even were it practicable, such a system was unnecessary.—Dr. PLAYFAIR pointed out that scarlatina had been held to be peculiarly dangerous to

lying-in women, though it might run a perfectly normal course, and in some cases it was untypical. These opinions were not disproved by Dr. Boxall, whose patients were placed in the most favourable conditions. Dr. Playfair suggested a theory which would explain the significance of two forms of scarlatina: (1) As conveyed through the ordinary channels of infection; (2) as conveyed directly to the genital tract by the hands of the obstetrician or midwife, or by infected sponges, etc. He recalled to mind the outbreak of puerperal fever in the lying-in ward of King's College Hospital. It was coincident with erysipelas in the surgical wards, but which did not present symptoms of erysipelas in the women.—Dr. AUST LAWRENCE (Clifton) believed that these cases did not die of scarlatina itself, but from the infected lochia. He related a case in which the patient was saved by timely washing out of the uterus.—Dr. HERMAN was of opinion that scarlatina when conveyed to a lying-in woman produced scarlatina and nothing else.—Dr. BRAXTON HICKS reviewed the position he had taken many years back of scarlatina in puerperal women, and he was still of opinion that scarlatina was mixed with true puerperal fever or septicæmia, the scarlatinal element being masked or latent.—Dr. MATTHEWS DUNCAN was of opinion that we should be more careful as to words; it was one thing to speak of antiseptic, and another thing to talk about anti-scarlatinal. For antiseptic treatment might keep away the microbe of suppuration or septicæmia, but it would not ward off scarlatina. He believed in the theory that the so-called scarlatina of midwifery and surgery included more than one disease, but he regarded true scarlatina occurring within a few days of lying-in as a disease of enormous mortality. He had observed a red rash, with fever, which began around the wound made in opening a chronic inguinal parametric sinus. The rash spread, but there was no certainty that it represented scarlatina. Dr. Duncan did not believe in the commingling of scarlatina and puerperal fever. When the former disease raged in London, killing 250 a week, there was no increase of puerperal fever. This fact agreed with Dr. DOLAN's practical conclusions.—On the motion of Dr. GALABIN, the discussion on Dr. Boxall's paper was adjourned.

Medical Miscellanea.

The subject of our next illustration will be Dr. Bucknill.

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Dr. Donald MacAlister, Fellow of St. John's College, Cambridge, will deliver the Croonian Lectures on "Antipyretics."

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At Waldeck, Germany, a law has been adopted forbidding the granting of a marriage license to any person who has become addicted to alcohol.

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A wooden case, containing a complete outfit of surgical instruments, has recently been discovered at Pompeii. Many of the instruments are said to bear a very close resemblance to those used at the present day.

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We learn from Egypt that Dr. Schliemann and Professor Virchow have been entertained at Cairo by Dr. Grant Bey. They are expected to return to Berlin about May.

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The annual dinner of the Medical Society of London took place at the Whitehall Chambers, Hotel Métropole, on Thursday, March 8th, Dr. Hughlings Jackson in the chair. Sir Thomas Crawford was also present.

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The Countess of Dufferin's Fund has found another supporter in the Pegu Municipal Committee, who have provided in next year's Budget for two scholarships, at twenty rs. per month, to enable Burmese women to study midwifery, and the civil surgeon has been requested to look out for suitable candidates.

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Two deaths are reported in the *Gazette Hebdom. des Sciences Medicales*, 4th March, after treatment by the method of Pasteur. (1) J. Mazoyer, age 4. St. Albain, bitten 6th December, treated at the Institute from the 12th December till the 7th of January; died on January 22nd. (2) Madame Delpech, Paris, age 52, bitten 23rd January; died on 17th February.

Dr. G. F. Cadogan-Masterman, Stourport, has published a small pamphlet of seven pages on Dermepenthesis, or animal skin-grafting, which opens out a new field of usefulness to the surgeon. Skin-grafting by the usual method has been attended by difficulties. Grafts from human beings are not always easily obtained. Dr. Masterman, after experimenting with frog's skin, has fallen back upon an animal so much used in experimentation—viz., the rabbit. We publish in another column a full description of the method.

Messrs. Baillière, Tindall and Cox, are to be congratulated upon the enterprise which prompted them to introduce to the profession in England, Wilkowskis' atlases, or super-imposed plates. They are intended for students, but we consider they are equally valuable to men in practice, as thereby they can keep up their anatomy. Dissection by the majority of men is out of the question, but by means of these plates the practitioner can at any moment refresh his memory. Part XI. has just come under our notice, and is illustrative of pregnancy at full term. The plate is admirably executed and has thirty-seven references. Accompanying the atlas we have a synopsis of practical obstetrics by Professor Pajot, translated by R. Milne Murray, Esq. Thirty pages. It is an excellent pamphlet, and rendered more valuable by some additional notes by the translator.

Should Dr. Murray's descriptive pamphlet not be found sufficient, Dr. Samuel Nall's Aids to Obstetrics can be recommended. It is an admirable summary of obstetrics, and we have no hesitation in saying that it is the best of the "aid" series. It consists of 137 pages of closely printed matter, with a good index.

The Dental Hospital of London, in Leicester-square, have announced a post-graduate course of demonstrations for registered doctors and dentists. We understand that it is intended to make the course of a very practicable character. Two demonstrations are to be given each day, and include such subjects as gold of various kinds, amalgam, and other soft stoppings; treatment of fractured maxillæ, of pyorrhœa-alveolaris, alveolar abscess, etc., all of which subjects are as interesting to the general as to the dental practitioner. In the report, which was unanimously adopted at the meeting on the 15th, the Managing Committee congratulated the Governors on the continued success and prosperity of the institution; also on the great benefits which the Hospital continues to afford to the suffering poor, 47,441 cases having been treated during the year 1887, a large number of them painlessly (under anæsthetics). It had been found necessary to further enlarge the Hospital by the purchase of the adjoining house for £3,500, increasing the mortgage debt on the Hospital to £5,500. There is still a deficit of £5,700 in the Extension Account, and the Committee specially appeal for funds to pay this debt which encumbers the charity, and curtails the benefits it would otherwise confer. The charity is unendowed, and increased funds would greatly extend its usefulness.

Henry Buchanan, *alias* Arthur Chadwick, *alias* Arthur Nelson, John Nelson, *alias* William Kay, *alias* Madame de Vere, of Cross Lane, Salford; John Wilson, draper's assistant, of Dunville-street, Byrom-street; Edward Thomas, described as a dispenser's assistant, residing in Lord-street, Chorlton-on-Medlock; and Raphael Shires, of Willow-street, Broughton Lane, were discharged on remand at Manchester, March 22nd, with conspiring to defraud different persons of various sums of money. Mr. W. Cobbett prosecuted on behalf of the police. Mr. Blair appeared for Shires and Thomas, Mr. C. M'Keand for Buchanan, Mr. A. T. H. Evans for Kay, and Mr. E. Desquesnes for Wilson.—Mr. Cobbett said that Buchanan and Kay were first prisoners arrested under a warrant charging them with attempting to obtain money by false pretences. The other prisoners were taken into custody subsequently, and all were now charged with conspiring together to defraud persons by falsely representing themselves to be experienced in the treatment of that which required a great amount of knowledge and skill. The following evidence was brought forward.—Mr. Cobbett said: A place of business was opened in King-street West, and one in Bridge-street. The books found in the possession of the prisoners at these addresses would form a very important part of the evidence to be given against the prisoners, for in them they spoke of their qualifications, experience, &c. These books had been sent to agents of the prisoners in various towns for distribution. The books were of an indecent character, and gave testimonials from numerous people who had been under the treatment of one or more of the prisoners. Some of the books have been distributed in the streets of Manchester. To show the genuineness of the books it was stated in one of them that they could be purchased from all booksellers in town or county, the price being

1s. each, but this was false. Mr. Cobbett next called the attention of the Bench to the fact that on one page of one of the books it was stated that Buchanan, or Chadwick, had been in the business for a period of twenty years. It also stated that he had an intimate acquaintance with a certain disease, for which he had a sure and safe remedy. As a matter of fact, this man did not commence business as a "specialist" until 1884, for previous to that he had been a betting-man, or a clerk to a betting-man, in Manchester. Shires, who sometimes had taken Buchanan's place, had followed a variety of occupations, while Kay had been a clerk, and Thomas a bookmaker's clerk. The place in King-street West, was described on the windows as the "Medical Institute—Nelson and Co.," and on the door was "J. Nelson, specialist," painted in large letters. In Bridge-street Shires and Chadwick seemed to be the leading spirits, but at each of those places the whole of the prisoners, he (Mr. Cobbett) would be able to prove, had taken an active part in the business. In some cases persons who had been under the treatment of the prisoners had paid as much as £5, £15, £20; and even as large a sum as £50 had been paid for a "specific" which was said to be very valuable. One person was charged £25 for a battery said to be worth a few shillings, and another paid £90 for treatment and medicine which could have been obtained for 25s. On one occasion a police constable went to the prisoner Kay, and was told that he was suffering from some disease, the fact being that the man was sound and healthy. For treating him Kay asked a fee of £5.—A number of witnesses were called in support of Mr. Cobbett's statement, and the prisoners were again remanded.

The above case suggests some thoughts. Are these men any more guilty than the persons who run the patent medicines and electro-belts (advertised so largely in the lay press), "to cure all diseases, where medical men have failed," etc.

If difference there be it is only in degree. The law in Germany is more stringent than ours, and patent medicines, or "cure alls," are there subjected to a rigorous censorship, and effectually suppressed.

The sale of patent medicines in England is marvellous. The poor working man, for whom we so officiously cater, providing for him *medicine and advice* for 2d. a week, readily pays his 3s. 8d. or 2s. 6d. for a bottle of Warner's Safe Cure, Mother Seigel, or other advertised nostrum, or parts with £1 10s. 0d. or 21s. for a piece of flannel, with a few metal discs sewn in; and then he coolly comes to us, and wants instantaneous and permanent relief for a few sous.

The Manchester specialists were only imitating the enterprising Holloways, Morrises, etc., and their books, filthy though they were, were advertisements of their filthy trade, the object of which was to make money. Testimonials they had, of course.

The extent of the advertising of some of the patent medicine vendors may be gathered from a statement in the *Medical Press and Circular*. Orders have been given "for Mother Seigel's Syrup, fifteen million chromo covers, and one million chromo box-tops; for Warner's Safe Cure, eight million chromo covers, and eighty thousand show-cards; for Howell's Golden Herb Pills, one million and a half of chromo handbills."

It is very singular that the religious papers are favourite mediums for the advertisement of quack remedies, and still more that the clergy are such strong upholders of the same. The reason, we suppose, is that we treat them so well. The profession, as a rule, attends the cloth free of charge, and is also obliging enough to help them in any charitable scheme.

We cannot prevent the public from spending their money as they choose. We may, however, legitimately object to recognise the plea that the working man is not able to pay a fair fee for medical advice (not for medicine), or that 6d. or 1s. dispensaries are at all necessary.

M. Jeffroy has related at the Academy of Medicine, Paris, a case of Friedreich's Disease. The patient had an incoördinate walk, like that of a drunken man, and was obliged to hold to surrounding objects for support; his heel was the first to touch the ground in walking. The foot presents no malformation, at least, in standing, but in sitting it has a tendency to assume a form of club-foot. The lower extremities manifest a slight degree of hyperæsthesia. Plantar reflex is intact, tendon reflex absent. There is a similar impairment of muscular power in the upper extremities. The patient eats grossly; writing becomes difficult, etc.

M. Féré relates (*Gazette Hebdomadaire des Sciences Médicales*, March 4th, 1888) a case of traumatic epilepsy cured by trephining. The patient, in battle, had been struck on the head by a small bomb-shell. Epileptic attacks followed. There had been no antecedent seizures. All medical means having proved of no avail, he applied three trephines, and found the internal table of the skull depressed. Since this operation (three months had elapsed) no epileptic seizure had occurred.

THE MEDICAL, DENTISTS', AND MEDICAL STUDENTS' REGISTERS. These Registers, which are in much demand, were published on the 21st instant, and copies may now be had from Messrs. Spottiswoode and Co., the Medical Council's Publishers.—The *Medical Register*, corrected and revised throughout from all available data, has had prefixed to it some additional preliminary matter of interest, in the form of statistics and tables. From the statistics it appears that, whereas the number registered in 1877 was but 940, the number registered last year was 1531 (showing an increase of 591); while the total number in the *Register* for 1876—the first year in which any such data as are now presented were ascertained—was 22,200, the number on the present *Register* is 27,246 (showing an increase of 5046), whereof about 66 per cent. were registered in London, 19 in Edinburgh, and 16 in Dublin. The number of pages in the present *Register* is 1172,—a large increase from the 335 paged volume that sufficed for 1859, the 548 pages for 1870, and the 598 pages for 1876.—The *Medical Students' Register* has prefixed to it similar tables and statistics, showing *inter alia*, for each division of the United Kingdom, the respective numbers registered in 1887 as having passed the several recognised examinations, and the numbers registered at each place of medical study.—The *Dentist's Register* has been subjected to a most thorough and searching investigation, a process already rendered absolutely necessary, owing to gross carelessness or neglect on the part of registered dentists. Soon after Midsummer, Inquiry-Letters, under section 12 of the *Dentists' Act*, were sent to all persons on the *Register*, and, three months later, nearly a thousand registered second Inquiry-Letters had to be sent, as prescribed in the cited section, to those who had not answered the first Inquiry. By this heavy labour, an unprecedented amount of errors has been disclosed and corrected. From the tables and statistics contained in the preliminary matter of the *Register* it appears that the unqualified dentists were, in 1879, 4806, or 91 per cent. of the whole, while the dental licentiates were 483; but in the present *Register* the licentiates have increased to 977, and the unqualified persons have diminished to 3889, or 79 per cent. of the total, thus showing already a decrease of 12 per cent.

Correspondence, Notes, and Queries.

Communications, Books, etc., should be addressed directly to the EDITOR, "The Provincial Medical Journal," Horton House, Halifax.

Matters of business should be addressed to the Publisher, at the Offices, 10, Friar Lane, Leicester; or to the London Representative, Mr. E. BELLA, 58, Charing Cross Road, W.C., to whom all communications respecting Advertisements should be addressed.

We cannot undertake to return rejected MSS. unless stamps sufficient for their postage are enclosed.

We shall be glad to receive reports of Medical Vacancies, Appointments, Meetings of Societies, etc.

Papers containing passages for consideration should be marked.

Correspondents must please attest their communications with their proper name and address (not necessarily for publication).

Contributions must be written on one side only of the paper.

MSS. intended for publication to be sent in not later than the 16th of the month.

The insertion of any letter in these columns cannot be taken as necessarily indicating our adhesion to the views or statements therein expressed. The same remark applies to articles to which a name or nom-de-plume is attached.

ON SOME VERY OLD FRENCH REMEDIES.

To the Editor of "The Provincial Medical Journal."

SIR,—I found in an old French book, published some 400 years ago, entitled "Dictionnaire Botanique et Medicale," some exceedingly ridiculous, preposterous remedies for all "the ills that flesh is

heir to," nearly all of them most revolting and disgusting. But, as in a heap of rubbish the *chiffonier* often finds a diamond ring or a silver spoon, so I have found two remedies in that book which were, some centuries later, employed in England and in Germany. The "Poudre de Trois Poivres" suggested to the Ward family an imitation of that remedy for hæmorrhoids—a confection called "Ward's Paste," which had been so strongly recommended by Sir Everard Home and by Sir Benjamin Brodie. Whether or not the chemist of that time knew anything of analysis it is hard to say, but in this book are recommended two syrups for pectoral affections, "*Sirup de Chou Rouge*" and "*Sirup de Chou Jaune*." Hoffman, a distinguished physician in Germany and a clever analytical chemist, must have (many years after this book was published) caught up a copy, and saw at once that the agent in these syrups was sulphur. He then adopted the habit of prescribing for chronic bronchitis five grains of sulphur three or four times a day; and, aware that stomach flatulence disturbed the respiration of old people, he added to each dose of sulphur some black pepper. Later on, some itinerant French organ-grinder brought into Ireland a recipe for coughs, which was handed down from father to son, and it seems, is still used up to the present day. Not long ago, I met an old widow lady, who said she was troubled every winter or spring with an attack of chronic bronchitis, and on the last attack she had to occupy her bed. She informed me that on this last occasion an old beggarman, who in his travels through the country was in the habit of paying bi-annual visits to her kitchen, informed the servant that he could cure the old lady's cough. Her cook was quite incredulous, and having told her mistress that he was *positive* he could cure her, she told her cook to let him have his own way. "I'll let you know after awhile what *my cure* is, but, in the first place, boil for three hours some cabbages, and, after seeing some of the neighbours, I'll return when I think the cabbage is boiled." When he returned he chopped up the cabbage, emptied a whole cruet bottle of black pepper and sprinkled a quantity of salt over it, telling the cook to give the old lady a tablespoonful of this compound every three hours. The old lady declared to me that "in two days she was quite relieved from her cough." Now, you observe two ingredients of this beggar's compound were used by Hoffman—viz., sulphur and pepper. I don't know if Hoffmann added salt. . . . Sir Dominick Corrigan, arguing from the action of quinine on the asthenic congestion of the spleen in ague, recommended the use of quinine also in asthenic affections of the lungs. Now, considering that in the East Indies practitioners prescribed *pipérin* with success when quinine failed to relieve, why should not the piperine of Hoffman's or of the beggar's cure also relieve typhoid cases of lung disease occurring in old people or in broken-down constitutions? As I have alluded to sulphur in this paper, I will say a word about Bergeon's proposed treatment of phthisis by the insufflation of sulphuretted hydrogen per "rectum." Now, inasmuch as many people have rather a surplus supply of this gas in their intestines, some of which, unconsciously to themselves, may travel up occasionally through the œsophagus, and become absorbed by the lungs from the pharynx, thereby working out Bergeon's theory. I cannot conceive how a further supply of sulphuretted hydrogen should be sent up the rectum. Adapting an apothegm of Horace to Bergeon's theory, I say—

"Sunt certi denique fines

Quos ultra citraque, nequid consistere "rectum."

Yours obediently,

JAMES J. COPPINGER, M.D.

Kantuck, Co. Cork,
March 7th, 1888.

DOG BITES—A PERSONAL EXPERIENCE.

To the Editor of "The Provincial Medical Journal."

DEAR SIR,—Are you aware that your book on "Rabies" cannot be obtained through booksellers? I have tried to get it through them, and could not. I should be glad to know through whom I could get it, and if I knew the price, would forward postal order for the amount.

I have written at different times to several papers on the injustice of allowing those who do not keep dogs, and the public, to be injured by the dogs which other people keep. Of course, it is the duty of mankind to diminish as much as possible accidental and avoidable deaths, and to make life as long, as secure, and as happy as we can; for only in old age can it pass away without pain, laceration, and sorrow. Last summer, myself and another man being bitten by a dog which the town authority and veterinary surgeon, after *post-mortem*, declared to have been rabid, brought the subject of dogs and rabies forcibly to my mind; and I consider it my duty to do my part to prevent the happiness of human beings suffering from preventable evils arising therefrom.

For scientific purposes I may state what my injuries were. The dog seized me on the calf of the leg. It did not tear the trousers or

drawers, and did not make the leg bleed, but left several tooth marks, pulling up the skin, but not clearly tearing the capillaries. It also left a reddish scratch, over an inch long. To get the dog away I seized it by the mouth, and in so doing it snapped and took the skin off my thumb, tearing the capillaries a little more than the circumference of a pin's head, and tearing the skin about one-sixteenth of a square inch, but not tearing the red flesh. Then I sucked it for about one and a half or two minutes. In less than five minutes I applied nitrate of silver, and in less than seven minutes washed the entire hand in crude coal tar naphtha. I only washed my leg in soap and water. The dog seemed feeble, and I thought it did not seem to know what it was doing. I saw the dog on the other side of the street one minute before, and thought what a strange dog it seemed. The other man was bitten much worse on the naked hand, and treated some half hour after at the Infirmary. It is now nine months ago, and I think we are both well, and, I trust, out of danger. I should like to read your book, and thinking you might not know how difficult it is to get, I have taken the liberty of writing you.—Yours faithfully,

Warrington,
March 19th, 1888.

S. K.

TARDY CONVALESCENCE IN THE PUERPERAL STATE.

To the Editor of "The Provincial Medical Journal."

SIR,—I treat all cases of the kind described by Dr. Johnston with the *Liquor Ferri Perchlor. Fort.*, in from two to five minim doses. The blood is deficient in fibrin, as well as hæmoglobin; hence, alkalies are worse than useless, because they intensify the mischief by lessening fibrin. The only untoward effect occasionally observed is the development of colic in the baby, from the action of the steel on the mammary secretion. This can be prevented by the administration of small doses of ammonia and soda to the baby, during the time the mother is taking iron. A remark or two here on the use of ammoniated ergot may not be out of place. Although there can be no doubt that this preparation acts very rapidly in securing contraction of the uterus, in virtue, in all certainty, of the diffusibility of ammonia, there is, I think, a risk of inducing hæmorrhage in cases of collapse, because of the defibrinating action of that drug on the blood.—I am, Sir, yours faithfully,

March 19th, 1888.

C. R. ILLINGWORTH, M.D.

PROVIDENT DISPENSARIES.

To the Editor of "The Provincial Medical Journal."

SIR,—Your article upon the present state of the medical profession deserves great credit for the true light in which the laity try to obtain the services of medical men. Would it be legitimate for the respectable portion of medical practitioners to issue hand-bills in opposition to these so-called bogus "Provident Dispensaries," pointing out how absurd it is that the public should be so gulled, and thus entrust their lives in the hands of these cheap medicine vendors? I, for one, would be only too glad to open their eyes, and so expose the utter loss of life caused by such cheap quackery. In this part of London handbills are given in all directions, and posters placarded on walls, announcing that on the opening of such a dispensary, "advice and medicine" will be given free for the first week. Something should be done, for the public either will not or cannot find out how to obtain proper medical advice.—Yours obediently,

White Horse Street, Stepney, E.,
March, 1888.

M. CURSHAM CORNER.

NOTICES OF DEATHS, BIRTHS, AND MARRIAGES, occurring in the families of our subscribers will be inserted, free of charge, in the *Provincial Medical Journal* if sent, duly authenticated, to offices.

Bibliographical Record.

BOOKS, PAMPHLETS, ETC., RECEIVED.

Aids to Obstetrics. By Samuel Nall, B.A., M.D. Cantab., etc., etc. Third Edition, pp. 142. London: Baillière, Tindall & Cox.

Aids to Dental Surgery. By Arthur S. Underwood, M.R.C.S., L.O.S., pp. 100. London: Baillière, Tindall & Cox.

Laryngoscopy and Rhinoscopy, in the Diagnosis and Treatment of Diseases of the Throat and Nose. By Prosser James, M.D. Fifth Edition, enlarged and illustrated. London: Baillière, Tindall & Cox.

The "More Excellent Way" in the Practice of Medicine, pp. 45. By John Clemenson Day, M.D. Lond. London: R. Gould & Son.

Lectures to Practitioners on the Diseases Classified by the Registrar General as *Tabes Mesenterica*. By W. T. Gairdner, M.D., LL.D.

On the Pathology of Phthisis Pulmonalis. By Joseph Coates, M.D. With twenty-eight engravings on wood. London: Longman Green & Co.

A Letter to the Registrar General on the Increase of Cancer in England, and its Causes. By John Francis Churchill, M.D. London: David Stall, Oxford-street.

Infant Feeding and Infant Foods. By J. McNaught, M.D. Deansgate & Ridgefield, Manchester.

Practical Manual of Diseases of Women, and Uterine Therapeutics, for Students and Practitioners. By H. Macnaughton Jones, M.D. Third Edition. London: Baillière, Tindall & Cox, 20, King William-street, Strand.

Notes on Diseases of Women. By James Oliver, M.D. Edin. London: Hirschfeld Brothers, Fetter-lane, E.C.

An Observation on the Physics of the Male Urethra, and Note of the Anatomy and Physiology of the Phrenic Nerve in Man. By W. W. Wagstaffe, B.A., F.R.C.S. London: Adlard & Son.

Waters and Baths of Aix les Bains. By Stanley M. Rendall, M.D. Edinburgh: L. Livingstone.

The Students' Handbook of the Practice of Medicine, designed for the use of Students preparing for Examination. By H. Aubrey Husband, M.B., C.M. Fourth edition, enlarged and revised. Edinburgh: E. and S. Livingstone, 15, Teviot-place.

Fifty-fifth Annual Report of the Sheffield Public Dispensary and Hospital, from July 1st, 1886, to June 30th, 1887.

PERIODICALS RECEIVED.

AMERICAN:—

1. The Journal of the American Medical Association.
2. The Therapeutic Gazette.
3. Medical Register (Philadelphia).
4. New York Medical Journal.
5. Medical Record (New York).
6. The Medical Bulletin (Philadelphia).
7. New England Medical Monthly.
8. Medical Times (Philadelphia).
9. The Polyclinic (Philadelphia).
10. The Analectic.
11. The Medical Standard (Chicago).
12. The St. Louis Medical and Surgical Journal.
13. The Denver Medical Journal.
14. Annals of Gynecology (Boston).
15. The Medical News.
16. The American Lancet.
17. The Medical and Surgical Reporter.
18. The American Druggist.
19. The Western Medical and Surgical Reporter.
20. The South Western Medical Gazette (Louisville).

BRITISH:—

21. The Philanthropist.
22. The Practitioner.
23. The Medical Chronicle.
24. The Medical Press and Circular.
25. The Journal of Microscopy and Natural Science.
26. The Indian Medical Gazette.
27. The Australasian Medical Gazette.
28. The Hospital Gazette.
29. The Journal of Rhinology.
30. The Birmingham Medical Review.
31. The Ophthalmic Review.
32. The Pharmaceutical Journal.
33. Public Opinion.
34. Health.
35. The Chemist and Druggist.
36. The British and Colonial Druggist.
37. The Australasian Journal of Pharmacy.
38. The Journalist.
39. Diet and Hygiene.

FRENCH:—

40. Journal de Medecine de Paris.
41. L'Union Medicale.
42. Le Progrès Medical.
43. Bulletin Général de Thérapeutique.
44. Gazette de Gynecologie.
45. Gazette Hebdomadaire des Sciences Medicales.
46. Journal de L'Ouest.
47. Journal du Nord.
48. L'Electrotherapie, Journal d'electricité.
49. Revue Pratique d'Obstetrique et d'Hygiene de l'Enfance.
50. Annales de Gynecologie et d'Obstetrique.

GERMAN:—

51. Centralblatt für Kinderheilkunde.
52. Centralblatt für Gynecologie.
53. Centralblatt für Chirurgie.
54. Illustrierte Monatschrift der Artzlichen Polytechnik.
55. Der Fortschritt.
56. Fortschritt der Medecin.

ITALIAN:—

57. Lo Sperimentale.
58. Rivista Italiana.
59. Rivista Internazionale di Medicina.

PORTUGUESE:—

60. A Medicina Contemporanea.

RUSSIAN:—

61. Vrach.

SPANISH:—

62. Rivista Clinica de Barcelona.

The above journals have been regularly received. We shall feel obliged if editors of British and foreign journals will notify whether their journals have been sent.

Copies of Index for 1887 may be obtained at office, 10, Friar Lane, Leicester.

ERRATUM.

Since going to press with the Biography of Dr. Bucknill, we find the statement that he has retired from practical work is an error.

Dr. Bucknill still practises as a Physician.

THE Provincial Medical Journal:

A MONTHLY REVIEW OF MEDICAL SCIENCE, LITERATURE, AND BIOGRAPHY.

. VOL. VII.]

MAY 1, 1888.

[No. 77.]

Our Portrait Gallery.

JOHN CHARLES BUCKNILL, M.D., F.R.C.P.,
F.R.S.

THE subject of our sketch has been one of the pioneers in lunacy reform, and has made for himself a reputation in a speciality which has been distinguished by the number of eminent men who have been associated with it. Though he has now retired from practical work, yet he has not lost his interest in that art to which his life has been devoted.

John Chas. Bucknill was born in 1817, at Market Bosworth, and educated at Rugby and Bosworth Schools. He received his medical education at University College, London, of which he is a Fellow, and has for many years past been a member of the council. In 1840 he graduated in honours in the University of London, being first in Surgery, and third in Medicine. In the College of Physicians of London he has been Censor, Councillor, and Lumleian Lecturer. In 1844 he was appointed the first Medical Superintendent of the Devon County Lunatic Asylum, an office which he held until 1862, when he was appointed Lord Chancellor's Medical Visitor of Lunatics, which office he held until 1876.

He is a Justice of the Peace for the county of Warwick, and a visitor of the County Asylum. In 1853 he originated—and afterwards edited for nine years—the *Journal of Mental Science*, and he is one of the original editors of *Brain*.

In 1877, as President, he delivered a remarkable address in the section of physiology, at the annual meeting of the British Medical Association, Manchester, in which he showed his broad views on the special branch of the profession in which he was himself engaged. "This occasion," he said, "seems opportune for speaking on a

subject of great and general importance to us as specialists—viz., whether the customary practise of our speciality does not frequently tend to impair our usefulness by limiting our field of observation, and narrowing our views of men and of society. . . . There can be no doubt that all special employment leads to narrowness of mind, and that the learned professions suffer from this most notably. This was indeed long ago pointed out by Archbishop Whately in his work on "Rhetoric," and there can be no doubt there is a legist's narrowness, a priest's narrowness, and a physician's narrowness." He told his audience how to get out of this, and insisted "upon the great need of the mental physician to breathe much of the pure air of rational life, for the sake both of himself and his patients. If there be one man more than another who ought to be a man of the world, it is the physician who has the care of the insane; for if he allows himself to become ignorant of the outside world, he will be able to make no comparison of the sane with the insane, and, therefore, liable to consider opinions and conduct morbid which are only strange." This address, short, learned, shrewd, of wide literary range, is an excellent sample of Dr. Bucknill's style.

He has published "Unsoundness of Mind in Relation to Criminal Acts" (Sugden Prize, 1857); "Manual of Psychological Medicine" (last half), 1858; "The Psychology of Shakspeare," 1859; "The Medical Knowledge of Shakspeare," 1860; "Notes on American Asylums," 1876; "Habitual Drunkards and Insane Drunkards," 1878; "Care of the Insane and their Legal Control," 1880; and also numerous pamphlets, lectures, and articles in journals on "Insanity" and allied subjects. In 1852 Dr. Bucknill, through the influence of the late Earl of Fortescue, obtained the permission of the Government that the 1st Devon and Exeter Volunteer Rifles should be embodied, and he was the first recruit of this the primary regiment of the New Volunteer Regiment.

Original Communications.

THREE CASES OF MALIGNANT DISEASE OF THE RECTUM IN WHICH COLOTOMY WAS PERFORMED.

By W. H. JALLAND, F.R.C.S. (EXAM.),

SURGEON TO THE YORK COUNTY HOSPITAL.

In cases of malignant disease of the rectum the treatment naturally resolves itself into two kinds—either curative by removal of the affected portion, or palliative. Unfortunately, in the cases I am recording, the hope of cure by means of excision of the rectum was quite out of the question. The disease in all the cases, involved far too large a surface of the rectum and contiguous parts for that operation to be entertained at all, and the only course left to be adopted was the palliative one, in hope, by so doing, to prolong life somewhat, and to make the remainder of life more comfortable. In the first two cases this has been so in a marked degree. Not only has the pain been relieved by colotomy, but both the cases are now going about fairly comfortable, and enabled to follow their usual avocations with apparently little trouble from the original disease or the artificial anus. The third case, unfortunately, was not not so successful. I only performed the operation in this case to relieve the almost impending complete obstruction which threatened, and although this result was obtained, the poor man sank in a few weeks from exhaustion due to the spreading of the disease, although he was quite well from the operation. All the cases were under my care in the York County Hospital, and the notes were taken by Mr. E. F. Morris, House Surgeon.

Malignant Disease of Rectum (? Epithelioma)—Colotomy—Recovery.—Samuel C—, æt. seventy, labourer, residing at Sutton, under White Horse Cliff, was admitted into the York County Hospital on May 30th, 1887. Patient has been ill now about eighteen months. His attention was first drawn to the disease by the loss of a great deal of blood when he had an evacuation, also by having great pain in his head. The loss of blood becoming greater, and its effect more weakening, he consulted a medical man. He suffered from constipation. He was not examined by a medical man till fourteen days before his admission. Family history, good; previous history, negative. On admission, a rectal examination was made, when it was found that there was a large, hard, irregular mass of new growth, involving the whole of the calibre of the rectum, which was strictured so that the finger could scarcely pass through, and the upper limit could not be reached; it was adherent to the prostate gland, and extended downwards almost to the anus. The examination caused a great deal of pain. The man suffered from constipation, alternating with diarrhoea, and there was always a good deal of blood passed with the motions. He had not lost much flesh, but was evidently a good deal pulled down by the great pain he suffered upon defecation and loss of blood. As it was quite impossible to remove the whole of the disease by excising the rectum, Mr. Jalland decided to perform colotomy.

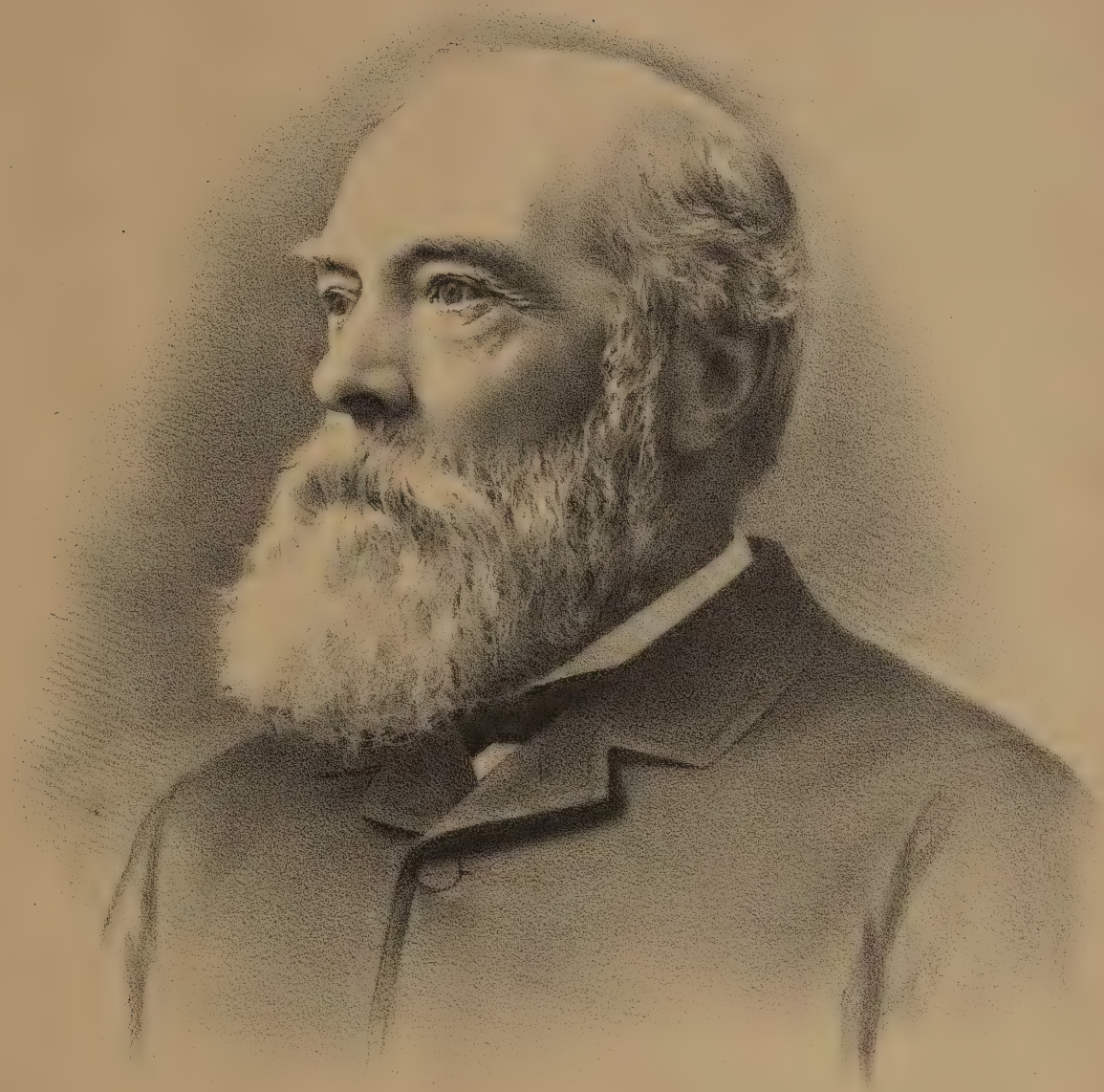
June 7th.—Ether being given, Mr. Jalland performed left lumbar colotomy. The oblique incision was adopted. The bowel, after slight difficulty, was discovered quite empty. It was raised, stitched to the skin, but not opened, and the operation was performed under the carbolic spray, and dressed with iodoform and salicylic wool.—June 8th.

Patient has passed a good night, and seems quite comfortable.—9th. This morning the dressings were removed, and Mr. Jalland made an opening into the bowel.—12th. As very little fæces had passed through the wound, some castor oil was ordered, and a piece of oil lint put into the opening in the bowel.—15th. A good evacuation through the wound.—17th. All the stitches removed; fæces pass through the wound copiously.—23rd. Patient doing very well; wound nearly healed; fæces pass freely through the artificial anus.—July 11th. Patient left the hospital to-day, much improved in health, and with a good artificial anus.—March, 1888. Patient has been frequently heard of since he left the hospital. He is now following his usual employment, which he is able to do with very little discomfort, and almost free from pain.

Malignant Disease of Rectum (? Epithelioma)—Colotomy—Recovery.—Eliz. A—, æt. about sixty-five, residing in York, was admitted into the York County Hospital on June 27th, 1887. Patient has been attending the outpatient department, under Mr. Shann, who advised her admission. She has been ill for twelve months. First noticed great pain in back, followed by diarrhoea, consisting of blood and mucus, and she compares the motion to "rotten liver." Nothing was noticed at the anus until fourteen days ago, when a sinus formed at the posterior part. Family history, negative; previous history, good. On examining the rectum, there was found an irregular mass encircling the gut within the reach of the finger, which so constricted it that it only admitted the tip. It was adherent to the posterior wall of the vagina, but had not perforated it. It extends down to the anus. Many sinuses round the latter. There was a constant discharge of blood and mucus from the anus, and great pain when any fæces were passed.

June 20th.—Ether being given, to-day Mr. Jalland performed left lumbar colotomy, the oblique incision being adopted. The bowel was found without any difficulty, and opened at once.—30th. Patient doing very well; fæces passing freely through the wound, very little by the stricture.—July 10th. Patient has been doing very well, except some slight increase of temperature, for which at present no cause can be found.—29th. To-day an abscess was found at the lower margin of wound, occasioning the rise of temperature; this was opened.—August 8th. Patient now quite well, except that her mental condition was not quite satisfactory.—15th. Was discharged to-day, with very good artificial anus.—March, 1888. Has been seen frequently since her discharge. The original disease seems to be making very slow progress. She has very little inconvenience from the artificial anus, and is able to follow her usual household duties.

Cancer of Rectum—Colotomy.—Robert A—, æt. sixty-two, was admitted into the York County Hospital on November 22nd, 1887. Complained of losing much blood by the rectum. He was admitted into the medical wards, under Dr. Turner, but finding that the hæmorrhage proceeded from some growth round and immediately within the rectum, he was sent to the surgical side of the house. Patient, an extremely cachectic-looking man, gives the following history:—About seven months ago, began to suffer from constipation. This continued for a month or so, the stools being at times somewhat tinged with blood. At the end of a month, diarrhoea set in, accompanied by great tenesmus, with much hæmorrhage. He began to lose flesh rapidly, lost colour, and was unable to sleep, so at last sought admission into the hospital. On admission,



Very truly yours

B. Smith

patient is extremely cachectic, very feeble, and emaciated, complaining most of pain and tenesmus on defecating, with much hæmorrhage. On examination, as far as the finger could reach was one hard infiltrated mass—rough, extremely vascular, and painful to the touch. At the upper portion the opening was very small, barely admitting the tip of the finger. He was advised, at a consultation held by Mr. Jalland and Mr. Hewitson, to undergo an operation—colotomy, and he consented. There was also a large mass of enlarged glands in the groin, evidently secondary infiltration.

November 27th.—Ether being given, Mr. Jalland made the usual oblique incisions in the left loin, operating under the carbolic spray. After division of the usual structures, the bowel was easily found. It was stitched to the sides of the wound, but not opened; dressed with salicylic wool and iodoform.—27th. Patient has passed a comfortable time, with the exception of some pain at the seat of disease, relieved by a small morphia injection. To-day Mr. Jalland opened the bowel with a tenotomy knife.—30th. There has been some escape of fæces to-day, and patient expresses himself as being more comfortable.—December 3rd. The opening into the bowel having closed a little, was enlarged, with much relief to the patient. Dose of castor oil ordered, after which there was a free discharge of fæces through the wound.—10th. Wound has now healed; still hæmorrhage from the anus, fæces escaping through artificial opening.—17th. Though the wound has healed, patient is very feeble, and does not rally, although he takes plenty of nourishment.—22nd. Patient rapidly failing; wound quite healed.—27th. Died to-day, simply from asthenia.

ON CANCER.¹

BY FORDYCE BARKER, M.D., ETC., NEW YORK.

THE opening of a new Hospital in this city, the first in this country and the second only in the world, devoted exclusively to the treatment of cancer, is an event of such importance that I greatly regret that the selection of a person to give the address had not fallen upon one more competent to do justice to the occasion. But some considerations have been forced upon me, which seem to make it an imperative duty to accept the position and throw myself on your kind indulgence.

One inducement which had its weight on my mind is the fact that I do not profess to be a surgeon, and as the wonderful progress made within the past decade, in the successful cure of many cases of cancer which before would have been left to die a miserable death, has been in the domain of surgery and the result of surgical proceedings, I can speak of these without any imputation of self-laudation.

My purpose is simply to show the necessity for and the usefulness of such a Hospital—to impart some knowledge of the nature of this terrible disease, cases of which will seek relief and cure within these walls,—and to correct some popular errors in regard to it which seem to be almost universal, and which the profession well know have caused an incalculable amount of unnecessary misery and unhappiness in the world. It is to be confidently hoped that the good which this hospital will eventually accomplish in the relief of unhappiness and suffering will be represented only in a minor degree by its future inmates, but will extend to many thousands who will never be within its walls.

¹ An address delivered at the opening of the New Cancer Hospital, New York, December 6th, 1887.

As preliminary to what I am about to say, I may be permitted to define some words which are in general use by the public in a sense quite different from their professional use. The word tumour when applied to any abnormal enlargement in any part of the system is one which carries terror to the minds of most patients, who often consult their physician because of an avowed apprehension that they have a tumour.

The word tumour is nearly but not exactly identical with the word swelling, and carries to the professional mind no significance as necessarily implying danger to life. We speak of glandular tumours, fatty, cellular, or fibrous tumours, as innocent, or benign, meaning thereby that they are purely local growths, having no tendency to extension by formation of other growths, and that if removed they are gone forever. But we also have what are called malignant tumours, which involve a destructive degeneration and gradual invasion of adjacent tissue, and which may finally infect the general system and destroy life.

Cancer, using the term in a general sense, is a typical form of malignant tumour. It is probable that this was first observed and studied as an external disease. The name is said to have been given to this affection by Galen, who lived in Rome in the latter part of the second century, a physician of great eminence, and one of the most accomplished and learned men of his age. From a fancied resemblance of the appearance of the disease as it extends itself into adjacent healthy tissues to the claws of a crab, he gave it the Latin name of crab, namely cancer. Since his day the name has been universally adopted both by the medical profession and the public, and is popularly applied to all forms of the so-called malignant growths, such as scirrhus or hard cancer, encephaloid or brain-like cancer, epithelioma, the rapidly growing, infecting, and recurrent forms of sarcoma, and other varieties, which may differ much in structure, and in their clinical features.

The malignancy which is the common characteristic of all, justifies the long-continued popular usage of the term cancer to cover all these diseases, and all come within the province of this hospital to treat. I will briefly refer to some of the peculiarities of this group of diseases which distinguish them from all others. They have for some years been gradually increasing in frequency and causing a larger proportion of deaths in those nations which are the most advanced in civilisation.

In the Forty-first Annual Report of the Registrar-General of England, published in 1880, it was asserted that the number of deaths from cancer was 5,218 in 1851, and 12,664 in 1878, but as the population had largely increased in this period, the increase in frequency will be more distinctly appreciated by the following quotation from this report: "The average annual mortality (from cancer) during the five years 1850-4 was 304 in one million living. In the five years 1870-4 it was 443, while in the year 1878 it was 512."

In New York City, the proportion of deaths from cancer in 1875 was 400 to the million. In 1885 it was 530 to the million. According to the Reports on Vital Statistics of the Census of the United States of 1880, the proportion of deaths from cancer to the total number of deaths reported from known causes was 36.68 to 1,000.

Cancer is a disease of advanced age. It is found in all ages but in very unequal proportions. In 8,193 cases the proportion of deaths under 5 years of age was 15.95 per 1,000, while from 5 to 10 it is only 2.82 per 1,000, and from 10 to 15 1.60 per 1,000. From the age of 15 the

proportion gradually rises in each quinquennium, until between the ages of 50 and 55 it reaches 130.18 per 1000. After this period the proportion gradually diminishes as the population of those living after this period of life decrease. Mr. Jonathan Hutchinson, of London, whose opinion on all questions of pathology is considered authority by the profession in all parts of the learned world, in the most able discussion which has ever been held on this subject, that before the Pathological and Clinical Society of Glasgow in 1886, said: "Of the causes which underlie the proclivity to cancer, and which render some races and some families more prone than others, we as yet know but little. What little we do know would lead us to believe that it has nothing to do with diet or with climate. The herbivorous animals are liable to it as well as the carnivorous, and so far as I know it prevails in all parts of the world where the conditions are favourable to longevity. Wherever, from whatever cause, they are not so, there cancer becomes relatively infrequent. It is almost unknown in those of our domestic animals which are used for food, for the simple reason that we never let them grow old, while in dogs, cats, horses, and asses it is common."

Dr. Billings says: "The increase of mortality from cancer with advancing age may be explained either on the theory that the cause of cancer becomes more potential in advanced age at the period of physiological decay, or on the theory that the predisposition to cancer belongs to the strongest and longest lived." The fact is settled beyond question, that in those populations where but few reach old age, cancer is proportionally rare.

There are some curious and interesting facts in regard to the geographical distribution of cancer, which science as yet does not satisfactorily explain.

The last census of the United States demonstrates that this disease is especially prevalent in the New England States and on the Southern Pacific coast, that it is prevalent in New York, Pennsylvania, Ohio, and in the interior of Michigan and the southern part of Wisconsin. That it is least prevalent upon the Mississippi and in the South, and that the proportions are generally lower in the coast regions than in the interior. An examination of the reports of death from cancer in England and Wales made by Dr. Havil and leads him to conclusions quite in accord with those derived from our own census. Both banks of the Tweed near Berwick, and of the Tyne at Newcastle, some parts of Yorkshire, and the whole of the beautiful lake district are fertile beds of cancer. The Isle of Wight is all but free from this disease, while it is common in Brighton, Folkestone, Dover, Ramsgate, and Margate. Statistics also demonstrate, as other facts have seemed to prove, that density of population, poor living, and laborious toil have very little to do with the development and appearance of cancer. Thus in London, in which, as a whole, cancer is very prevalent, the parish of St Luke's, the neighbourhood of Bishopgate-street, crowded Bethnal Green, the Isle of Dogs, Rotherhithe, and Bermondsey, are almost exempt from this disease, but in the respectable parts of the metropolis, about the Marylebone-road, Regent's Park, and Primrose-hill it is exceptionally frequent. In Liverpool, which has a large mortality from other causes of death, the percentage of deaths from cancer was very small. In the future it may be discovered that in the localities where the prevalence of this disease is most frequent, they have certain characteristics in common which science may overcome and thus notably diminish this tendency in such localities.

In the Report on the Vital Statistics, of the United States of the Tenth Census in 1886, it is remarked that the peculiarities of the differences in mortality from cancer in different localities may be in part explained by differences in the population of these localities as regards race and age. It is a disease which is much less frequent in the coloured than in the white race, hence the mortality from it is greater in the North than in the South. It causes the greatest proportion of deaths where there are the greatest proportion of people of advanced age,—that is to say, in the New England States. Hence in any given locality, a large proportion of deaths from cancer indicates, to a certain extent, that the locality is a healthful and a long-settled one and has a large proportion of inhabitants of an advanced age.

Cancer is not a disease due to misery, to poverty, to bad sanitary surroundings, to ignorance, or bad habits. On the contrary, it is a disease of the most highly civilized, the most cultured, the wealthy, and of localities which are the most salubrious. One of the characteristics of cancer is that, unless the brain is involved, it leaves intellectual power and force unimpaired. Nay, it seems that in some cases it almost increases these qualities.

No pathetic incident is more indelibly stamped on my memory than a visit made to a victim of this disease, whom I found, as I often had before, seated at his writing-table, his drawn, pallid face expressing fatigue and suffering, but still more expressive of will force and a remarkable power of endurance.

"Excuse me," he said, as I entered the room, "until I finish a paragraph that I have just begun." After a few moments he laid down his pen, saying with a sad gleam of satisfaction: "There, since your visit yesterday I have written eight pages."

After the commencement of his painful illness, stimulated by the hope of overcoming reverses and leaving his family in circumstances to which their former position entitled them, he succeeded in accomplishing a larger amount of work, and receiving a greater pecuniary reward for it, than in the history of the world was ever before acquired for literary work in so short a period of time.

Census reports are to most persons uninteresting, and the value of the two large volumes of the last census, which relate to the vital statistics of this country, can be appreciated by but few persons; nevertheless, I wish to call your attention especially to the importance of these books, and to the remarks in which Dr. J. S. Billings, of the United States Army, under whose direction they were compiled, sums up the conclusions which may be drawn from them, and points out the way in which such statistics should be extended, improved and made reliable as a means of increasing our knowledge of the causes of pain and death, and the means of destroying or of diminishing these causes.

The belief has been almost universal, both with the profession and the public, until within a comparatively recent period, that cancer has generally an hereditary origin. It is probable that no doctrine in regard to the cause of disease has given rise to so much and so causeless misery and unhappiness in the world as this. In those who have some symptoms which they suspect to indicate the beginning of this disease, suspicion becomes a conviction, if any relative of a former generation has died of cancer. They may almost be said to begin the pangs of a moral death long before it is demonstrable that physical death is

inevitable from this cause. If the patients have any family history of this disease, and are suffering from any acute or chronic affection attended with symptoms which they have heard exist in cancer, the affect of this conviction is not only depressing, but dangerously complicates conditions which otherwise might result in recovery. I have personally known many illustrations of the truth of both of my two last assertions. Again, I have more than once been asked in those pathetic tones which tell of heart-breaking anxiety: "Are my children or is my daughter doomed to suffer as I now do?" The answer given in no equivocal words is: "The probability of such a doom for any descendant of yours is extremely small." In all the statistics which I have been able to collect, where the antecedent family history seemed to be trustworthy, I have found that the proportion of those who have had cancer, in whom some relative of a former generation is reported to have had some form of malignant disease, to be only 13.65 per cent. On the other hand, in one family which has in the present generation the largest number of victims that I have ever personally known, I have authoritative proof for asserting that no development of any form of malignant disease has ever existed in three previous generations, including collateral branches.

Before a professional audience I could give a list of names which would be regarded as conclusive as to present belief of the profession on this point. More than a quarter of a century ago, Mr. Jonathan Hutchison, whose opinions carry the greatest weight, expressed his disbelief in hereditary origin as an effective cause. Recently, that is during the past year, in a notable and most able discussion of this subject, he said: "It is utterly useless to employ such a term as hereditary transmission of cancer in such a sense as we speak of the transmission of some other diseases.

A proclivity to the disease may result from the conjunction of certain parentage, but it cannot be said to be inherited from ancestors in whom it did not exist. We may speak of cancer being hereditary as we speak of delirium tremens as hereditary, but in neither case is this transmission of the disease. Parents cannot transmit to children disease which has no existence in their own system previous to the birth of the children, and thus it is absurd to say that a daughter has inherited the disease which her mother first developed twenty-five years after the birth of the daughter.

A cancer bacillus is as yet unknown in science, and the most recent investigations have failed to find any. But I observe that Sir James Paget, in a lecture delivered on the 11th of November, expresses the belief that micro-parasites or substances produced by them will some day be found in essential relation with cancer and cancerous diseases. But as yet there are no ascertained facts which support this belief.

In a paper read before the Academy of Medicine in 1870, I then avowed the opinion that cancer could not be regarded as an hereditary disease, but that an hereditary tendency to it often exists in those whose ancestry has been wholly exempt from it. In such it is probably developed by some local exciting causes.

Cancer was regarded by Abernethy (a great authority in pathology and surgery during the early part of the present century) as being simply the local manifestation of a constitutional disease. Within the past few years a large number of the most eminent pathologists have become

adherents to the doctrine that it is primarily a local disease, and that the constitutional affection is a secondary result.

This is not the time or place to review the various able arguments which have been urged in favour of one or the other view, but it is a point of great importance as effecting the question of the curability of the disease. In the first place, no medicine has yet been discovered which acts specifically in retarding or curing the disease, as quinine and mercury and others do in certain specific diseases. No man has the moral right to administer any drug without some well defined view of the end which he wishes to accomplish and a well grounded belief that the drug he selects will probably effect this result. But in cancer we do not know what primary changes are necessary in either tissue or function to prolong life or cure the disease. Even if we did know this, no drug has yet been found which experience has proved will effect these changes. So it may be positively asserted that no case of cancer has ever been proved to have been cured by medical treatment. But many cases have been arrested for months and years by surgical treatment; and as after three years it is generally believed that the probability of recurrence is very slight, we have the right to say that many cases have been absolutely cured by total removal of the disease tissues.

I think sufficient facts have been accumulated, especially within the past ten years, to justify the following assertions:—

Total removal of the whole diseased growth, when it is found as a distinctly limited affection, the lymphatic glands not being involved, it is highly probable will be followed by a cure.

If the disease has involved the lymphatic vessels and glands, the chances of cure are materially diminished; but in many cases an operation has proved to be of great service in relieving suffering and prolonging life for months and in some cases from one or two or three years.

After the local disease has existed a sufficient length of time to contaminate the blood and infect the general system, a cure by an operation or by any other method is absolutely hopeless. Great progress has been made in successful surgery within the past few years by a resort to the operation at the earliest possible period, that is, so soon as the existence of the disease can be determined.

The most recent, and probably the most authoritative writer on this subject, Mr. Butlin, of London, asserts that every week of delay increases the danger of the contraction of various adhesions, of affections of the secondary glands, and of the formation of secondary growths. But duration alone is not a conclusive argument against the success of an operation; for, as the same author adds: "When long duration of a malignant tumour is associated with a very slow progress, small size, absence of serious adhesions, absence of affection of the neighbouring lymphatic glands and of secondary growths, so much the more favourable is the prospect of permanent relief from operation for its removal." The question of the locality of the growth is one of great importance in forming a decision as to the necessity and probable success of removal, and will always be carefully and conscientiously weighed before a decision is made. These malignant growths may appear in any tissue of the body, external and internal, and eminent surgeons of this city, as elsewhere, have removed them with all the success anticipated from muscles, bones, lymphatic glands, the eye, the face, the lower lip, the tongue, the breast, and other external organs.

If this were a fitting opportunity, and time would permit, I am sure all present would be interested in hearing an account of such as I have a personal knowledge of, either from my own observation, or from a knowledge derived directly from the operators. But such details would be inappropriate on the present occasion, and I am compelled to deny myself the pleasure of paying a just tribute to the skill and sound judgment of surgeons that we have in our city.

Dr. S. W. Gross, of Philadelphia, asserts: "The convictions are steadily gaining ground that this disease in the breast is primarily a local affection, and not a constitutional one, and that these views are supported by many of the most eminent men living—pathologists such as Virchow, of Berlin; Bilroth, of Vienna; Fersche, of Breslau; Esmarch, of Kiel; Nussbaum, of Munich; Volkman, of Halle; Erichsen, Hutchison, Gull, Simon, Bryant, Green, and others, of London; and the late Dr. Gross, and Parker, Peters, Moore, Richardson, and others, in the United States, have shown by the statistics of their practice, and that of others, the usefulness and success of the surgical removal of the disease."

But as I have said before, removal of the disease by operation is not restricted to external organs, for many operations for removal of internal organs have been performed with all the success that could be anticipated, although it must be added there have been many failures. On November 14th, three weeks ago, I was present when one of the Medical Board of this Hospital performed one of the most difficult operations ever attempted in surgery—viz., the entire removal of the most important internal organ. I had previously seen the patient, and concurred in the opinion that the operation was imperatively necessary, and that it offered a fair promise of success. I may add that the opinion of the operator and myself was given independently, each without the knowledge of the other. The patient, as I have learned within a few days, has had no unfavourable symptoms which have retarded her convalescence. It is possible that she may hereafter escape any return of the disease. It is certain that her life has been prolonged, and that she has been saved from months or perhaps years of suffering, which would have soon ended her days. A fair number of cases have been reported in which such results have been attained. And yet so late as fifteen years ago, any proposal to attempt such an operation would have been condemned by the universal sentiment of the profession; and if it had been attempted and resulted in failure, the public would have denounced the operator as a reckless, unscrupulous butcher, who had no conscience as regards the result to his patient, but simply sought personal glory in the éclat of having performed a wonderful operation. All of us have before heard such language applied to surgeons.

The case which now commands the most universal sympathy and interest in all nations of the world is that of the Crown Prince of Prussia. It is an unparalleled event in history that three men, two of whom had been at the head of the government of their respective nations, and the third, whose probable inheritance was an empire, should each have been victims to malignant disease in contiguous localities, differing only in some minor details, at the same period in the world's history. In the case of President Grant, the locality of the malignant growth was such, that it was decided by the most competent authority, that from the

beginning a successful removal by surgery was not practicable, as the danger from such an attempt would be greater than the probability of any benefit. During the illness of General Grant, I received a letter from the brother-in-law of Don Ferdinand, ex-King of Portugal, and his attending surgeon, detailing the history and description of the case of the ex-King, in whom malignant disease had also appeared in the mouth, very near to but not exactly in the same site. From the description given the conviction was irresistible to my mind that it would be impossible, by any surgical procedure, to remove the whole of the disease tissue, and that any attempt of the kind would be attended with such danger as might be followed by immediate death, and would undoubtedly shorten the duration of his life. His death followed within a few months that of our honoured ex-President. As regards the probable future of the case of the Crown Prince, none but those able men who are in attendance upon him, and who must have a knowledge of many details which are essential elements, but which it is impossible to explain to the world, are competent to form or express any opinion of value. In general terms, I may say that his general health is reported to be very good; that the progress of the disease appears to be slow as compared with some cases I have seen, and I may add, if it be decided by his medical advisers that partial or entire excision of the larynx should be performed, we have abundant evidence that in a certain number of cases both of these operations have prolonged life to a period when the probability of recurrence is very small. In some cases entire excision has saved life for a length of time that gives great encouragement for hoping that the ravages of this terrible disease have been arrested. Two such happy results have been reported in this country and several abroad. Dr. Roswell Park, of Buffalo, in June, 1885, removed the entire larynx on account of the existence of this disease in a patient who was himself a medical man. In a letter dated November 22nd, he writes to me: "The doctor has a number of relatives in Buffalo, and as I frequently see one or more of them, I am kept pretty well informed as to his condition. My latest news is so recent as last week, and to the effect that he is as well as ever."

It must be obvious that all new and important operations are followed by a progressive success in their results, as the methods of operating are improved in their details, and as the after-treatment necessary becomes better known. The percentage of successful results increases in a ratio in proportion to the experience acquired by the increasing number of the operations. Indeed, I may add that it is my conviction that the progressive number of cures of this terrible curse to humanity is in a more rapid ratio than the progressive increase of the frequency of the disease.

Need I say more, in the light of the past, to point out what may be hoped for in the future from such a hospital as this, under the devoted zeal of the active staff, whose ability, competency, and faithfulness to their duty have already been demonstrated in other positions. Can any one have a doubt as to the probable service to humanity which will result from the careful observation and study by such competent men of details that can never be acquired except in a large hospital?

I question whether any, even the most sanguine, has more than a feeble conception of the benefit to the victims of the disease to be here treated, and to thousands of others, that will result from the opening of this Hospital.

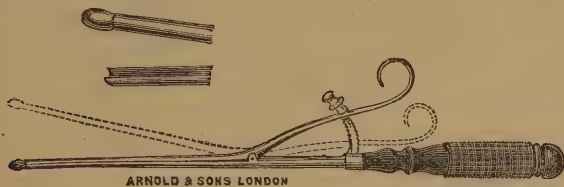
ON THE TREATMENT OF OBSTRUCTIVE
DYSMENORRHOEA AND STERILITY.¹

BY THOS. MORE MADDEN, M.D., F.R.C.S.E.,

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(Continued from page 167.)

Operative Treatment of Cervical Stenosis.—As the method I employ in these cases differs in some respects from that generally adopted, I may be here permitted to refer briefly to its details. I may observe that during the past eleven years I have operated on several hundred cases of stenosis, and within the last year I thus successfully treated in my hospital very nearly a hundred such cases, in many of which I had the assistance of Dr. Duke, Obstetric Physician to Stevens' Hospital.



In the first place, I would advise that this operation should be undertaken about a week after the termination of the last painful menstrual period, and that it should be preceded by daily hot water syringing for some days. To proceed with any comfort to ourselves or advantage to our patient, she should be placed under ether or mythelene, and adjusted in the ordinary left lateral semiprone position, on a proper gynæcological couch or table. Then, the cervix being exposed by the duck-bill speculum, the anterior lip is seized by a strong volsellum, and drawn down by an assistant as close to the vulva as possible, where it is to be retained. Next the sound should be passed to ascertain the position of the uterus, as well as the immediate permeability of the canal. Then the metrotome (and I myself much prefer Simpson's original instrument to any of its modifications) should be introduced well into the uterine cavity, and, being expanded to whatever extent may be deemed necessary in each case, should be withdrawn so as to divide the cervix freely in a transverse direction from the os internum to the outer orifice of the passage. It should be again introduced, and the same procedure repeated downwards, and again in an antero-posterior direction. The uterine cavity should now be syringed out with hot water so as to wash away all clots and arrest any hæmorrhage; then I introduce the dilator already described, and, expanding this to its full extent, I allow it to remain for a few moments, and then withdraw the instrument, with blades apart, so as to tear asunder and distend the cut surfaces until I can pass my index into the uterine cavity. In this way any probability of either hæmorrhage or of subsequent reunion of the divided parts is effectually provided against. Lastly, I introduce a tampon of Lawton's cotton, saturated in glycerine of carbolic acid, which is left *in situ* for some days, so as to fill and distend the passage from the uterine cavity to the os externum. The introduction of this may be found by no means an easy matter by the uninitiated,

and can best be effected by the employment of the sliding repositior.

After the operation the patient must be kept in bed on low diet, and syringed daily with hot water for eight or ten days, any pain being meanwhile treated by opiates and poultices. After this period a flexible tube or uterine stem pessary is introduced, which should be worn for another month, and then, and not sooner, the patient may resume marital life with a fair possibility of subsequent impregnation, and almost certainty of immunity from recurrence of dysmenorrhœa.

With regard to the results of this operation, my experience has been most satisfactory in the curative treatment of a large proportion of the cases of sterility and obstructive dysmenorrhœa that have come under my observation. This result I ascribe mainly to the thoroughness with which I carry out the dilatation and disruption of the contracted passage in the cases referred to. And as I have been reproached by some more timid practitioners with what they regard as the rashness or boldness of my practice in this respect, I may here venture to add that when cautiously, albeit boldly, carried out, in appropriate cases and by expert hands, no ill results need attend the operation in question, and I myself have had no such reason to regret its performance. In only two cases have I seen any serious hæmorrhage after it. Nor have I found it necessary to plug the vagina in such cases, as I have seen done by some practitioners, to the great discomfort of the patient. In very few instances have any inflammatory symptoms or cellulitis followed its performance, and in these cases the operation had already been performed by other gynæcologists previously.

Vaginismus as a cause of Sterility.—Besides cervical stenosis there are other causes of sterility which must also be considered in this connection. Of these, one of the most frequent and most important is vaginismus. As, however, I have discussed the pathology and treatment of this condition in a previous paper, I need here only briefly refer to those points which bear most directly on the subject of the present communication.

Excessive sensibility of the vaginal orifice and adjacent parts, more especially when associated with such spasmodic contraction of the sphincter vaginæ as to form an impediment to marital intercourse, or dyspareunia, occasionally becomes a matter of considerable gynæcological interest in connection with the treatment of sterility. In such cases the hyperæsthetic condition of the vaginal outlet is evinced even on the slightest attempt at local examination, and is most marked about the meatus urinarius, and in the vicinity of the orifice of the vulvo-vaginal glands and fourchette, whence the hymen, if existent, projects upwards.

With regard to the pathology of vaginismus, there are almost as many divergent views as there have been writers on the subject. For my own part I think the most rational explanation of these symptoms may be found in the hysterical temperament of the majority of those thus affected, although in some cases there is also present an abnormal condition of the pudic nerve, one branch of which runs along with the artery to the clitoris, whilst the other, or superficial perineal nerve, is distributed to the perinæum and labia, in which its terminal branches ratify freely. This fact in the ætiology of the disease is one the practical importance of which will be seen in connection with the treatment of vaginismus.

Treatment.—It was long since said in reference to this complaint by Dr. Marion Sims, that there is "no disease

capable of producing so much unhappiness to both parties of the marriage contract." I may here add from experience, that in many instances it may be found utterly impossible to deal satisfactorily with extreme cases of this kind by any of the ordinary plans of treatment heretofore generally recommended. As a rule, in the treatment of such cases very undue importance is given to local operative measures, whilst the constitutional treatment which is invariably necessary in all instances of well-marked vaginismus is too generally neglected. For whilst excision of the hymen, division of the pudic nerve, destruction of erythematous and serpiginous patches, dissections out of neuromata, etc., may each be indispensable in certain cases, in quite as many they are unnecessary. And, from my own clinical observation I can vouch for the possibility in some cases of relieving the most intense dyspareunia resulting from this cause, so as to enable the patient to fulfil all her duties as a wife and eventually as a mother, without any operation beyond the forcible mechanical expansion of the vaginal canal. Before resorting even to this expedient we should, in the first place, employ the sedative treatment, local and general, which is indicated in all other nervous or hysterical disorders, and which, as I believe, is essential in nine-tenths of the cases of vaginismus that come before us, whilst in only one-tenth of them is any surgical or operative measure necessary.

Amongst the topical palliative remedies that may, conjointly with the constitutional nerve sedatives just referred to, be employed in these cases are warm baths and vaginal irrigations, local application of solution of hydrochlorate of cocain or of glycerine of carbolic acid, or the introduction of suppositories of cocain and belladonna. When such palliative measures have been fairly tried without advantage we may then resort to mechanical dilatation of the vaginal orifice and stretching of the pudic nerve. For this purpose, having first fully etherised the patient, a large-size Graily-Hewitt bivalve speculum should be introduced and expanded to its fullest extent. Then a tampon of absorbent cotton large enough to fill the speculum should be soaked in glycerine and passed up to the cervix, its lower end projecting through the external opening of the instrument. This, still fully expanded, should then be forcibly drawn out, leaving the central tampon behind in the vagina. It need hardly be observed that this procedure occasions severe pain. At the same time, however, it as certainly tears through some of the superficial submucous muscular fibres of the affected part, as well as effectually stretches the terminal vaginal branches of the pudic nerve, and thus affords a generally efficient and safe method of overcoming the spasmodic contraction with which we have to deal in cases of vaginismus. Any subsequent contraction or hæmorrhage that may follow this procedure is sufficiently met by the tampon, which may be retained for at least twenty-four hours.

In some cases, however, this method of treatment does not suffice, and we must then resort to either Emmet's or to Sims's operation for vaginismus. In some instances I have found the hæmorrhage following these operations sufficiently serious, and in one of these I had to thank our Hon. Secretary, who was called in in my absence, for the arrest of a very alarming loss of blood, occurring some hours after the operation, in the case of a young lady on whom I performed Sims's operation.

It should here be observed that even in cases of vaginismus so extreme as to effectually prevent complete marital intercourse, the disease is not necessarily an absolute

barrier to impregnation. In one instance of this kind that came under my observation some years ago, so extreme was the local hyperæsthesia as not only to preclude the probability of complete cohabitation, but also to prevent the patient's submitting to any local treatment for the relief of the morbid condition. Nevertheless conception occurred, and I subsequently was called in to deliver her at full term, and in doing so was obliged to incise the still-unruptured hymen, by which delivery was obstructed.

Obstructive Dysmenorrhœa and Sterility from Vaginal Occlusion.—Amongst the causes of the morbid conditions under consideration some reference must be here made to occlusion of the vaginal passage whether by congenital malformations, or, as more frequently met with in gynecological practice, from cicatricial adhesions the result of disease or accident. With regard to the latter, although I have met with them in some instances, fortunately, however, clinical experience of retained menstruation, dyspareunia, and impeded delivery consequent on *post-partum* adhesions of the vaginal walls is fortunately more limited than must have been the case in the practice of our professional predecessors, in those good old days when the second stage of labour was allowed to run on until the vital powers were all but completely exhausted, before instrumental assistance was afforded in cases of difficult parturition. Nevertheless, as I have already observed, such cases are still occasionally met with.

Of somewhat greater frequency in the causation of this condition in modern practice is the opposite error. In other words, the integrity of the vaginal canal is now much more likely to be injured by the misapplication of the forceps before the sufficient natural dilatation of the passage, or by the misdirected force or undue haste with which instrumental delivery may be effected by injudicious practitioners.

Another occasional source of cicatricial obstruction or obliteration of the vagina is the abuse of escharotics or instruments intended for the treatment of uterine disease. It may also possibly result from syphilitic disease, as well as from phagedænic ulceration or direct injuries to the vulvo-vaginal orifice.

In the first volume of the *Transactions of the Academy* I have referred to my experience of the treatment of cases of vaginal occlusion, and regret that space prevents my now dwelling further on this subject, as such cases appear to me of much interest, not only from their comparative infrequency, but still more from the possibility of this condition being an occasional cause of menstrual retention, and an obstacle to impregnation or parturition. Moreover, they would serve to illustrate the special risk attending the surgical treatment of cicatricial vaginal obstructions. The latter point is one which should never be lost sight of in such cases. It was demonstrated by a distinguished Irish obstetrician, the late Dr. Evory Kennedy, in *The Dublin Quarterly Journal* many years ago, that the treatment of vaginal occlusion is by no means as safe as it is facile. This observation has been corroborated by recent writers, and more especially MM. Bernutz and Goupil, who have shown conclusively the risk of dividing these obstructions or adhesions by any cutting instrument, and the comparative safety of digital separation—the mortality following the use of the knife as compared with the surgeon's finger in such cases, being almost as three to one.

Chronic Endo-cervicitis as a Cause of Sterility.—Lastly,

we must here refer to another and more frequent factor in the causation of obstructive sterility and dysmenorrhœa—viz., what was formerly termed chronic inflammation, and since more properly designated areolar hyperplasia, of the cervix uteri. A brief glance at the pathology of this condition will show its importance in relation to the study of sterility. Suffice it to say that the theory by which this disease was for many years ascribed to idiopathic inflammation, leading to ulceration of the cervix uteri, has been long since abandoned, except, perhaps, by its author, and that it is now as generally regarded as the result of passive congestion, or hyperæmia, commencing in the cervical mucous membrane, the ciliated epithelium of which is thus primarily tumefied and softened, whilst later on the whole tract of the endo-uterine mucous membrane becomes disintegrated and hypertrophied. After a little time this hyperplasia extends to the subjacent muscular structures of the uterus generally, and gives rise therein to those sero-plastic exudations and infiltrations by which the effected parts are at first mechanically distended and thickened. As the disease goes on these plastic exudations becoming organised eventuate in new connective tissue, or true congestive hypertrophy, or areolar hyperplasia of the uterus. At the same same time follicular degeneration of the hypertrophied cervical glands occurs, and in their subsequent proliferation in most instances may be found the explanation of the conditions formerly regarded as the result of ulceration of the cervix uteri. The structural differences between the endo-uterine and endo-cervical mucous membrane are also of direct interest in this connection, explaining to some extent the greater proneness of the latter to hyperæmia, and the greater probability of this condition in the former being more immediately communicated to the underlying parenchyma. For whilst the ciliate membrane lining the cavity of the uterus is directly superimposed on the muscular substance, without the intervention of any sub-mucous layer, and has numerous utricular muscular fibre, the endo-cervical mucous membrane, on the contrary, rests on a sub-mucous layer, and is arranged in numerous folds branching off on either side from the central ridge, and thus presenting the appearance known as the *arbor vitæ*. This membrane is lined with ciliated epithelium, and interposed between its folds are countless racemose glands or Nabothian follicles opening between the ridges of the arbor-vitæ, and under diseased conditions pouring out that viscid, white-of-egg-like secretion so generally found blocking the os uteri and cervical canal in gynecological examinations.

In such cases the functions of the uterus are invariably disturbed. The menses are abnormal; generally they are attended by severe pain; in some instances they are diminished, but more commonly, menorrhagia as well as dysmenorrhœa result from the local congestion and irritation; and in a large proportion of cases of this kind I have observed that the abnormal menstruation recurred every third week, and lasted for six and seven days, whilst in the interval the patient was further weakened by the leucorrhœal discharge already spoken of.

Sterility almost always accompanies this disease, and as long as it exists to any serious extent the patient must remain barren. This fact, which I regard as of great practical importance, is too generally ignored in practice. I have known instances in which patients were subjected to active surgical treatment to overcome a supposed mechanical obstacle to impregnation, and who nevertheless remained childless, no attention having been paid to the

existence of chronic uterine congestion, on the subsequent cure of which pregnancy has followed.

General Treatment of Utero-Ovarian Hyperæmia leading to Sterility.—It would be out of place here to enter fully on so wide a subject as the treatment of the various phases of uterine hyperæmia productive of sterility. This I have elsewhere discussed,¹ hence I need not now allude to the local measures necessary in such cases, and shall merely refer very briefly to some few points which I regard as essential in connection with the general treatment of infecundity traceable to that condition.

At the present time medical attention is far too exclusively given to local treatment in all instances of chronic utero-ovarian hyperæmia; and whilst, for my own part, I attach as much importance to this as any gynecologist should do, I am convinced by experience that the reason cases of chronic endometritis, salpingitis, oöphoritis, and their cognate conditions so often prove obstinate and protracted in their course is that the improved methods of local treatment thus exclusively generally relied on are not aided by appropriate constitutional remedies. I have long urged the importance of the constitutional relations of certain forms of chronic utero-ovarian diseases, and have shown their general association with constitutional causes, and more especially with the strumous diathesis. I now again venture to call attention to the paramount importance of combining effective constitutional remedies with whatever topical measures may be found necessary in such cases, firmly believing as I do that they who thus judiciously employ general as well as local treatment, will be much more likely to cure their patients than those who rely altogether on the latter. In the majority of instances the subsidence of intra-uterine hyperplasia causing barrenness will be materially expedited by the administration of a course of bichloride of mercury, in minute doses, given in tincture of bark and continued for some time after the disappearance of all apparent local uterine congestion. In sterile patients of strumous diathesis, endometritis, in addition to the topical medication referred to, demands general treatment similar to that required in other local manifestations of this cachexia, and especially the use of those special alteratives and tonics with which the resources of modern polypharmacy have so abundantly supplied us.

Change of Climate and Mineral Waters in Certain Cases of Sterility and Dysmenorrhœa.—In dealing with cases of barrenness dependent on utero-ovarian complaints connected with the constitutional causes just referred to, and more especially in those associated with the strumous diathesis, the curative influence of a judicious change of climate and the utility of the various chalybeate, sulphurous, iodated, and arsenical mineral or thermal waters—which may be selected in accordance with the special exigencies of each case—is unquestionable. The accuracy of the views I have long maintained on this subject is sufficiently attested by the freedom with which they have been appropriated, and that, moreover, without any acknowledgment, by some recent writers from the works² in which I have shown the advantages, collateral and direct, of a visit to a suitable foreign spa,

¹ On the Constitutional Character and Treatment of Chronic Diseases of Women, etc. By Thomas More Madden, M.D., 1886.

² On change of Climate in Treatment of Chronic Diseases. T. More Madden, M.D., Third Edition, 1874. The Spas of Germany, France, and Italy. By the same, Second Edition, 1884. The Health Resorts of Europe and Africa. By Dr. More Madden. London and New York, 1886.

whenever, feasible, as a supplement to the local treatment adopted in chronic uterine affections. These benefits are not only the actual remedial effect of whatever mineral spring may be chosen, but still more the moral and physical benefits of the change of climate, occupation, and mode of living involved in the journey to any distant watering-place.

Whenever uterine or ovarian dysmenorrhœa, dependent on local hyperæmia, are present there is no remedy of such universal applicability as the prolonged use of warm or tepid baths. Nature has given us a wide choice of such baths, suitable for almost every form of chronic inflammatory uterine, and ovarian disease in the natural thermal springs which are found in almost every country. The waters which are used for this purpose are generally so feebly mineralised as to lead many to suppose that their effects are due to their mere temperature. Be this as it may, however, the fact remains that tepid thermal waters exercise a remarkable sedative action on the nervous and vascular systems. Under their use the frequency of the pulse is diminished, pain insensibly disappears, and all nervous irritation is gradually allayed. Effects such as these point them out as especially suitable for cases of chronic uterine hyperæmia, leading to sterility in hysterical women. Under these circumstances the effects of prolonged immersion of the body for hours together in water at the temperature of from 87° to 96°, or 98°, is peculiarly sedative. The spas which are available in this way, and from which I have myself seen most advantage in cases of chronic uterine disease, are those of Bath; Pfeffers, in Switzerland; Schlangenbad, in Nassau; Wildbad, in Wurtemberg; and Claudfontaine, in Belgium. To be of use these tepid thermal baths must be employed for long periods at a time, though it would probably be difficult to persuade ladies of the present day to stay in their baths as long as was at one time commonly the case at Pfeffers, when, as an old author assures us, patients remained in the water for whole days together.—“*Multa dies noctesque thermis non egredientur; sed cibum simul et somnium in his capiunt.*”

In sterile women, moreover, the gouty and rheumatic diatheses often show themselves in chronic uterine complaints, rather than in any of those external forms of the same constitutional disorders more commonly observed in the opposite sex. This fact, too generally ignored, explains the efficacy of alkaline mineral waters, such as Vichy, in many of the chronic uterine diseases of barren women of gouty habit, and utility of iodated and arsenical mineral springs, such as Kreuznach, Wildeg, Royat, and Monte Dore, which I have severally found of signal use in shortening the course of congestive hypertrophy of the uterus in women of these constitutional proclivities. By thus availing ourselves of all the varied resources of constitutional as well as local treatment in our dealings with chronic disease of the uterus, in our treatment of sterility, we shall, as I have before observed, best consult the advantage of our patients, and reflect credit on that gynæcological art which it is our province to cultivate, and to raise from that narrow specialism to which some would degrade it, to its true place as an integral portion of the great science of medicine.

Conclusion.—Ovarian and tubal inflammation, manifested by soreness, tumefaction, and occasionally burning pain in the ovarian region, is one of the most frequent consequences and accompaniments of uterine hyperæmia. In these cases the disease extends from the uterus, along the fallopian tubes to the ovaries, and this to a great extent accounts for the fact I have just mentioned, that patients suffering

from endo-metritis or endo-cervicitis, are sterile for the time being.

Were it not that I have already possibly exceeded the prescribed limit of time here allowed to readers of papers, I should have wished to state my experience with regard to the treatment of cases of sterility and obstructive dysmenorrhœa due, as is so often the case, to uterine flexions and displacements, and more especially to retroflexion of the uterus; or to fallopian tubal or ovarian causes, such as öophoritis and salpingitis, to which latter importance should be assigned in this connection, as well as to those just referred to. I must, however, rest content, for the present—as I hope to be allowed to return to this important subject on some future occasion—with having, in the foregoing communication, described the methods of treatment which I have found most successful in a large proportion of the numerous cases of barrenness and painful menstruation which have come under my care in the gynæcological department of my hospital and in private practice during the last few years. Moreover, I have also pointed out more briefly the principles which I believe should guide our treatment in the other forms of the complaints alluded to. I trust that the Academy will pardon the unavoidable length of this communication, and by a fair and full discussion of the views I have now submitted, aid practitioners in the curative treatment of a class of cases second to none in their importance and frequency.

THE GENERAL PRACTICAL USES OF ELECTRICITY IN MEDICINE AND SURGERY,

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(Continued from page 108.)

Electrical Application in some Affections of the Genito-Urinary Organs.—Electricity is particularly useful in the treatment of affections of the genito-urinary organs for more reasons than one. In the first place, the lowest nervous centres or points for the transference of impulses from the afferent to the efferent nerves, which preside over these parts, are situated in the lumbar enlargement of the spinal cord, and a current of electricity can be so localised as to include the whole of this lower nervous system in the circuit. And in the second place, these organs communicate externally by narrow mucous passages, which enable them to be directly reached from without, when necessary for curative purposes, but offer serious difficulties to the employment of many agents that can be effectively used in other parts of the body. It is to these passages and parts difficult of access that the electrolytic properties of electricity, and galvano-cautery are found so adaptable and useful.

Incontinence of Urine.—Incontinence may be produced by a variety of causes. In children it may be due to the irritation produced by a too long foreskin, or to the irritation caused by ascarides, or to a too acid condition of the urine, usually accompanied by an excessive amount of oxalates, or to the presence of a stone in the bladder. Any of these causes having been detected, their removal is often sufficient to cure the enuresis. But there are other cases which are solely of a nervous origin; the patient can hold his water during the day, but at night sleep is so deep that the inhibitory control of the higher nervous centres over the reflex

centres in the spinal cord is in abeyance. Immediately any appreciable amount of urine collects in the bladder, a knowledge of its presence is transmitted along the afferent nerves to the spinal cord, and a message is returned for the bladder to expel it. These are the cases which are most readily amenable to electrical treatment. A pad (fig. 1) connected with the negative pole of a constant current

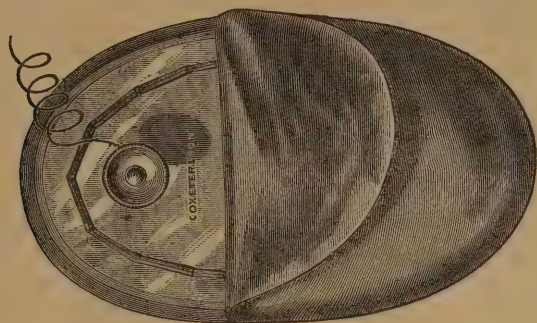


Fig. 1.

battery is placed over the lumbar enlargement of the cord, in the lower dorsal region, and a small button electrode (fig. 2) attached to the positive pole is placed on the perinæum. The whole nervous apparatus of the bladder is thus brought more thoroughly within the circuit than by any



Fig. 2.

other means, except that of placing an electrode into the urethra, a plan which can be avoided if cure is effected by the application of an electrode to the perinæum. The positive pole is applied to the perinæum, because it is less irritating, and the space is too limited to allow of the electrode being moved about more than an inch or two; we are, therefore, able to use a stronger current than if the poles were reversed. In some cases of troublesome frequency in micturition, occurring in adults suffering from locomotor ataxy, it is found that the negative pole on the spine increases the irritable condition of the spinal cord, and aggravates the infirmity. In these cases it is, therefore, sometimes found to be imperative that the positive pole, which possesses a sedative property, should be applied to the spine, and the negative to the perinæum. Adopting this plan, good results have been obtained.

There are other conditions in the adult which produce frequency of micturition, or involuntary expulsion of urine, such as enlarged prostate, or a hard bronchitic cough in old people, which cannot be cured by electricity applied in the way I have mentioned, although an enlarged prostate can be dealt with by electrolysis or galvano-cautery; but *cystitis*, which also causes frequent micturition, can often be relieved. It can also be caused by an incautious use of electricity, as was mentioned in my last paper. To relieve cystitis the bladder should contain some urine, or if empty, should be filled with tepid water, and a vesical electrode (fig. 3) should be passed into the bladder, but not allowed anywhere to touch its walls. The fluid surrounding the end of the electrode diffuses the current over the whole mucous surface of the bladder, and most likely the electricity acts beneficially by altering the condition of the mucous membrane, so as to render it more healthy. It is difficult to define accurately in what cases the beneficial effects of the current are due to its electrolytic action, and

those in which its stimulating properties, or influence as a nerve tonic, are of the greatest value. In all instances, no doubt the electrolytic power is brought into play more or less.

In the treatment of cystitis only a weak current of about five milliamperes is used for six or eight minutes at each application. The applications should be daily for the first five or six days, and then on alternate days for the remainder of the fortnight. In some cases galvanism has to be continued for a much longer period. Incontinence of urine



Fig. 3.

and atony of the bladder are very common in females, either from injury during parturition, or from prolonged retention, sometimes caused by an acutely anteflexed, or gravid uterus. Incontinence also sometimes follows forcible dilatation of the urethra, when made for the removal of a stone, or for the purpose of exploring the interior of the bladder. No treatment is so effectual in these cases as that by electricity. When there is atony of the walls of the bladder from over-distention, or any other cause, the constant current may be used as before described, with one electrode on the perinæum; but when there is inability to hold the water from over-dilatation or weakness of the urethra and sphincter vesicæ, then it is best to hold the metal point of the vesical electrode (fig. 3) in the urethra, and to use the interrupted current for ten minutes daily, or every other day, as strong as the patient is able to bear it. With the finger just within the vagina, to insure the electrode being kept in its proper place, the contractions of the muscular layer, forming the sphincter, can easily be felt. Inability to hold the water has also often occurred in the male after the dilatation of a stricture near the neck of the bladder. These cases should be treated in the same way with the Faradic current. The subject of the treatment of stricture of the urethra by electrolysis will be dealt with in the next paper.

I have already in the St. Bartholomew's Hospital Reports¹ recorded, five cases of atony of the bladder, in which the patients had lost the power of expelling urine, thirty-eight cases of enuresis, and five cases of cystitis accompanied by incontinence or frequent micturition. Nearly all the patients were either cured or relieved. Of the cases that were cured, six or eight applications of electricity were usually sufficient. One patient in Martha Ward, under the care of Dr. Matthews Duncan, had lost complete control over her bladder, from prolonged retention caused by the pressure of a retroverted gravid uterus on the neck of the organ and the urethra. Her water had been drawn off daily for nearly seven weeks. She recovered perfectly after four applications of electricity. Another patient from the same ward, suffering from pyuria, had had her urethra forcibly dilated for the purpose of exploring the bladder, and was subsequently troubled by incontinence. The urethra had been so stretched that it

¹ St. Bartholomew's Hospital Reports, vols. xix. and xxii,

could not recover itself, and the water was continually dribbling away. She had been in this uncomfortable state for several months when she was sent to me, and improved rapidly under electrical treatment. One young man, aged nineteen, had wetted his bed from infancy, and had been discharged from the militia on account of his infirmity. One woman, sent to me by Dr. Godson, had incontinence of urine when in an erect position. This was due to a prolapse of the posterior wall of the bladder and the anterior wall of the vagina, which dragged upon the urethra and slightly opened it. The prolapse had been the result of previous difficult labours. The electricity seemed to restore tone to the muscular walls of the vagina and bladder, and she was discharged quite well. Several of the patients were unable to retain their urine when making the slightest extraordinary exertion, such as going up stairs, lifting weights, and even when laughing or crying. Some are similarly afflicted when riding on horseback. I do not remember any of these cases which have failed to be cured by electricity. One case of incontinence followed a severe injury to the lower part of the spine. This patient had greatly improved before he left the hospital.

For the following abstract of three cases of enuresis, recently treated at St. Bartholomew's, I am indebted to my senior assistant in the Electrical Department, Mr. P. A. Houghton:—

Case 1.—George S——, aged seven, was admitted as an out-patient in November, 1887. Has never held his water properly since birth. Has control over his bladder in the day time. Wets his bed every night. Has nothing to drink late at night. No worms. Galvanism—negative pole to perinæum, positive to lumbar spine—current strength three milliamperes. December 3rd.—Still wets his bed, but not so soon after going to rest. January 13th, 1888.—Has gone the last fourteen days without wetting his bed. In this case there was gradual improvement for about seven weeks, after which there was a slight relapse, but the boy was unable to continue his attendance at the hospital. Instead of wetting his bed every night, he had so far improved as to hold his water without accident for fourteen consecutive nights before he discontinued treatment.

Case 2.—Lucy H——, aged eight years, was admitted an out-patient in December, 1887. Had scarlatina nine months ago. Since then has not been able to hold her water properly either by day or by night. Passes water as a rule every half-hour during the day. Wets the bed every night. Does not pass more water in the twenty-four hours than natural. Urine found to be quite normal. Galvanised. Positive pole applied to vulva, negative to lumbar spine. The current of strength was one milliamperè, passed for five minutes. This treatment was applied twice a week. In three week's time she could hold her water for four hours at a time. In a fortnight more she frequently went five and six hours. Has not wetted the bed for three weeks.

Case 3.—Ellen H——, aged seventeen, admitted an out-patient January, 1888. Increased frequency of micturition for the last four months. Passes water about every two hours in the day time, and rather oftener at night. Cannot keep any situation on account of her infirmity. The urine is quite normal. Catamenia are regular and natural. Has been taking medicines without any effect. Faradism to the neck of the bladder. A strong current was used. Passed for ten minutes twice a week. This was continued for six weeks. She had then gone a fortnight without wetting the

bed, and during the daytime goes about three or four hours.

In the treatment of *gleet* electricity has been found very successful. It is used somewhat in the same way as medicated bougies. The metal part of a vesical electrode or electrical bougie, such as is used in the treatment of stricture, is held against the sore unhealed surface which keeps up the discharge, and which is frequently to be found on the bladder side of a stricture. The electrode is made negative, and is moved slowly backwards and forwards over the sore surface for about two or three minutes, with a current strength of five milliamperes. The electrode connected with the positive pole is placed on some indifferent part of the body, but by preference over the lumbar enlargement of the cord, as possibly the effect of the electricity upon the nervous supply of the urethra may be beneficial. In the treatment of *gleet* no doubt the electrolytic property of the current is the chief agent at work. The unhealthy ulcerated surface on which the *gleet* depends is decomposed or altered in such a way as to put it into a condition in which it will heal.

Impotence, or inability to perform the sexual act, is also often greatly improved by electricity. It is employed for this purpose much more frequently in America and France than in our own country, but I have seen great improvement take place by "central galvanisation" as described in the first paper of this series (p. 57), chiefly by applying the negative electrode to the lower part of the spinal cord.

I mentioned in my last paper the good results obtained at Guy's Hospital, in the treatment of *amenorrhœa* by statical electricity. I have had a case sent to me by a well-known London surgeon, now retired, who possessed a large and fashionable practice. The patient, aged twenty-six, was a fine, well-developed girl, with a good complexion and clear skin, but did not appear to be quite so intelligent as most young women should be at the same age. She had not menstruated properly for eleven years, and had, during the last ten years suffered from epileptiform attacks. During the first two years these attacks came on about every three months, then every month until the year before I saw her, when the fits occurred every week, and sometimes oftener. Nearly every recognised remedy for *amenorrhœa* had been tried without effect, she was therefore sent to me to see whether electricity, applied direct to the uterus, would improve her condition. The uterus was found to be ill-developed, the sound entering only about an inch and a quarter. A pad was placed on the abdomen, above the pubes, attached to one pole of a Faradic battery, and a uterine electrode attached to the other pole was placed against the os uteri. The current was used eight times during the first two months, for ten minutes at each application, about the time it was supposed that menstruation should appear, because it corresponded with the time that the monthly epileptic fits used to appear previous to the last year. At the end of the second month some slight show occurred, which was repeated at the end of the third month, only one epileptic fit having occurred during the three months. At the end of the fourth month a very fair menstrual discharge took place, and the patient has been almost well since that time, now very nearly a year. During this period the patient has been brought by her mother for treatment about three times, because, from symptoms which had occurred, they dreaded a return of the epileptic fits; but the patient has been free for months together from any sign of giddiness or unconsciousness, menstruating regularly,

and losing at each period a fair quantity. This is quoted as being an extreme case, and one in which electricity had a marked beneficial effect.

In a discussion which followed a paper read by Dr. Gibbons, before the Obstetrical Society of London, in February, of last year, on a case of unilateral galactorrhœa,¹ which, while resisting all treatment, the flow of milk ceased spontaneously on the occurrence of menstruation, it was advocated as a mode of treatment in these cases that the function of menstruation should be re-established, and Dr. Routh² suggested the introduction of a foreign body into the cavity of the uterus, such as a small piece of nitrate of silver, to effect that purpose.

In the *British Medical Journal*, of April 30th, 1887, p. 926, is also a paper by Dr. James Braithwaite, of Leeds, in which he advocated the mechanical treatment of amenorrhœa by the introduction of small foreign bodies into the cavity of the uterus. He used to employ "a piece of hempen ligature, doubled several times, knotted, and impregnated with pitch. This was easily passed up to the fundus, without any preliminary dilatation, and then left there." He has more recently used stems of different patterns. The introduction of a piece of nitrate of silver into the uterus seems to be a most barbarous mode of treatment, and the other mechanical methods employed for stimulating or exciting the uterus, do not seem so free from objection as the use of the interrupted current. It would seem that if menstruation is to be established by the introduction of a foreign body into the uterus, the temporary presence, for ten minutes a day for a few days of a uterine electrode, is the least objectionable of any of the methods proposed. By the literature on the subject published in America and France, it would seem that Faradisation of the uterus for amenorrhœa is a well-recognised and frequent mode of treatment, and that the results obtained are highly satisfactory.

THE ELECTRICAL RESISTANCE OF THE BODY IN GRAVES' DISEASE.³

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DR. NORRIS WOLFENDEN demonstrated by observations made upon a series of thirty cases of Graves' disease the diagnostic value of a certain phenomenon attending this malady, which had been remarked by Charcot and Vigoroux in 1886. This phenomenon is the marked alteration in the resistance offered by the body to the passage of an electric current.

Normally, this resistance is more, often much more, than two thousand ohms, while in Graves' disease it is found to fall as low as five hundred occasionally, and it seldom continues to be over a thousand ohms for more than two or three successive observations if taken at an early period in the course of the disease—that is, before active treatment is begun. The method used in making these observations is fully described in the above-mentioned paper by Dr. Wolfenden: it is so simple that any person having the few necessary instruments may supply the test to suspected cases of Graves' disease in two or three minutes. I have lately had, at Dr. Wolfenden's clinic at Golden-square, the opportunity of measuring the electrical resistance in nine cases of Graves' disease and five cases

of simple gôitre. Having made a series of forty-six observations in these fourteen cases, the results seem sufficiently encouraging to be worth publishing, more especially as they confirm the results arrived at by Dr. Wolfenden. In making these experiments, cells were used sufficient to give an electro-motive force of eight volts.

The electrodes used were of metal, covered with chamois leather, about two inches in diameter, and were moistened in a saline solution before being applied, one at the back of the neck, and the other at the top of the sternum. The use of these "standard" electrodes eliminates that fruitful source of error, the old fashioned sponge. I shall give first the cases of Graves' disease, with the E.R. (electrical resistance) at various dates.

1. F. L., æt. sixteen, E.R. was on 27th January, 780 ohms; 31st January, 1000 ohms; and so on for eight observations, ending on 21st February, 4500 ohms. 2. M. G., æt. twenty-one, E.R. on 3rd February, 500 ohms; 14th February, 570 ohms. 3. A. L., æt. thirty-two, E.R. on 3rd February, 750 ohms. 4. A. C., æt. twenty-two, E.R. on 31st January, 625 ohms. 5. J. C. (sister of the last), æt. fourteen, E.R. on 3rd February, 1150 ohms. 6. A. P., æt. twenty-three, E.R. on 31st January, 1900 ohms; 10th February, 800 ohms; 21st February, 2300 ohms. 7. F. L., æt. eighteen, E.R. on 10th February, 1000 ohms; 14th February, 1000 ohms. 8. J. C., æt. nineteen, E.R. on 27th January, 550 ohms; 31st January, 750 ohms; and so on for six observations, steadily rising under treatment, to 1360 ohms on 17th February. 9. A. N., æt. thirty-six, E.R. on 27th January, 700 ohms; 31st January, 750 ohms; 3rd February, 600 ohms; 7th February, 1000 ohms; ending on 21st February, 900 ohms. The remaining five cases are simple gôitre. 10. S. G., æt. forty-seven, E.R. on 27th January, 4500 ohms; 3rd February, 7500 ohms; 10th February, 8000 ohms. 11. A. M., æt. thirteen, E.R. on 3rd February, 3000 ohms; 10th February, 2700 ohms. 12. E. I., æt. twenty-three, E.R. on 17th February, 7500 ohms. 13. J. B., æt. fifteen, E.R. on 7th February, 2000 ohms. 14. A. H., æt. twenty, E.R. on 27th January, 3500 ohms; 31st January, 3000; 10th February, 1150 ohms; 14th February, 2000 ohms, and so on; seven observations ending on 21st February, 4800 ohms.

A comparison of these cases will show that in only one of the cases of Graves' disease was the minimum resistance noted above 1000 ohms, that is No. 5, where only one observation was made, and the E.R. was 1150 ohms; while in only one case of simple gôitre did the E.R. ever fall so low as 1150, that is No. 14, and in this case it was much higher before than after. Seven of the cases of Graves' disease showed at some time in their course, when under observation, an E.R. of 800 ohms or less; while four of the cases of simple gôitre never fell below 2000 ohms. Thus it is seen that there is a broad distinction between the electrical resistance in the two sets of cases, and Dr. Wolfenden's conclusion that the method forms a most valuable aid to diagnosis between simple gôitre and early or undeveloped forms of Graves' disease is confirmed by my observations. The vast importance of noting this distinction is enforced by the fact that of the nine cases of Graves' disease, only one (No. 2) was what would be called a "well marked case," that is, showing considerable exophthalmos, von Graefe's sign, etc., and all might have been unrecognised by a careless observer. As the symptoms were so little advanced in many of these cases, while the E.R. was remarkably diminished, it hardly admits of doubt that many cases of Graves' disease might be

¹ Obstetrical Society's Transactions, vol. xxix., p. 59.

² *Ibid.*, p. III.

³ A Paper published last year in the *Practitioner*.

diagnosed very early by this method when the usual distinctive triad of symptoms was as yet undeveloped.

The cause of this diminution in the E.R. remains to be discovered. Dr. Wolfenden has suggested that it may be due to "vaso-motor dilatation of the skin capillaries," so I made notes of the pulse-rate, and the surface temperature in most of these cases. The speed of the pulse seems to have no relation whatever to the E.R., but the surface temperature shows an apparent relation. In seven out of nineteen observations the thermometer registered 90° or more, and in six of these seven cases the E.R. was at or below 1000 ohms. In several other cases, however, where the E.R. was as low as this, the thermometer did not rise higher than 88° or 89°, but this of course may be due to its not being held properly in contact with the skin, which is very difficult to ensure, unless the patient is constantly watched. I used Mayer's "Self-holding Surface Thermometer," which, however, cannot be trusted to hold itself, but must be retained in position by one finger pressing lightly upon it. About ten minutes is needed to bring the mercury up to its full height. No definite conclusion can correctly be drawn from the temperature observations.

THE VALUE OF MERCURY IN OPHTHALMIC PRACTICE.¹

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It will be my aim in this paper to lay before you the result of my own clinical observation during the past twelve years at the Eye Hospital, at the ophthalmic department of the Bolton Infirmary, and also in private practice. As it is to be a *resumé* of personal experience, I shall not burden you with references to the opinions of others, but shall content myself with the selection of typical examples of the various affections of the eye in which I have found mercury of decided value. I must explain that it is to the *constitutional* effects of mercury that I refer, and therefore I shall not enter into details as to the value of mercurial preparations, like the red oxide, the yellow oxide, calomel, etc., in the treatment of blepharitis, phlyctenular conjunctivitis, and keratitis; nor to the antiseptic value of highly diluted solutions of the perchloride.

The topical, rather than the chronological, order will be observed. The first case that I shall therefore refer to is a case of—

Primary Chancre of Eyelid.—Thomas A.—, æt. twenty-two, attended the Eye Hospital on the 4th March, 1882. For the past six weeks he has suffered from a hard chancre on his penis, and also from what he described as a little inflammation of the right lower eyelid, which gradually got harder and more swollen. On examination, I found a considerable area of the lower lid punched out with its edges very hard and brawny, injection of the conjunctival sac, and swelling of the præ-auricular gland on the same side. Under the influence of mercurial ointment and the application of black wash externally, the condition of the eyelid became quite normal. He was then advised to continue under medical observation. This brief history well represents the course of this, by no means, common affection. My colleague, Dr. Mules, has at present (Feb.,

1888) a very peculiar example under his care at the Eye Hospital, which he was good enough to draw my attention to. A boy of seven was brought by his mother for what she considered an inflammation in the right eyelid. On examination, it turned out to be a well-marked primary chancre, accompanied by great swelling of the præ-auricular and sub-maxillary glands. He was at once put under mercury (inunction) with the very best results. It was impossible in this case to obtain any history as to how the disease had been contracted, but the necessity of accurate diagnosis will be apparent to all of you.

The next group of cases I shall refer to, is paralytic affection of the third nerve—

Paralysis of Third Nerve.—Ptosis.—Sarah M.—, æt. thirty-three, attended at the Eye Hospital, November 17th, 1883. There was history of syphilis communicated by her husband two years ago, and of continued ill-health, and, lately, great giddiness. At this date, well-marked ptosis in right eyelid, pupil sluggish to light, active to accommodation, movements of muscles inwards, upwards, and downwards much diminished. Ordered mercury in five-grain pills taken up to slight salivation.—December 21st, ptosis completely disappeared, and all the ocular movements normal. She afterwards took iodide of potassium, and has had no relapse.

Ptosis and Paralysis of Third Nerve.—Mary Yates, æt. three years, admitted to the Bolton Infirmary, December 22nd, 1885. Her mother said that seven weeks ago she noticed almost complete drooping of the *left* eyelid, and about a week later of the *right* eyelid. She could give no history of the cause, but said it was possible the child had been exposed to draughts. At that date we noticed there was ptosis of both eyelids. In the *left eye*, complete paralysis of internal and inferior recti muscles. In the *right eye*, paralysis of superior and inferior recti muscles. No dilatation of the pupils; vision normal in both eyes; urine, sp. gr., 1020, no phosphates, no albumen. The child was admitted as an in-patient, and mercurial inunction was resorted to.—On the 30th, she was fully under the influence of mercury, and inunction stopped. Already the ptosis was less marked, and the action of the paralysed recti restored slightly. Half-grain doses of iodide of potassium thrice daily ordered.—January 20th, no ptosis; ocular movements perfect; and the eyes, in every respect, normal. The rapidity with which the child was affected by mercury is explained by the fact that she had been taking it in small doses before she was put under my care. I could detect no symptoms indicating a central lesion in this case, but it affords an instructive example of the value of the drug in such cases.

I have not met with typical examples of *gummatous growths in the orbit*, causing exophthalmos, etc., but a recent case under the care of Dr. Mules, which he has kindly permitted me to mention, will answer my purpose very well. The patient was a middle-aged woman, with a large solid growth, pushing the eye downwards and slightly outwards, and with very obscure history. Dr. Mules, one day, was almost tempted to make an exploratory incision, but before doing so he determined to try mercury, and after giving it for some weeks without producing very marked effects on the growth, iodide of potassium was substituted with the happy result that the growth entirely disappeared, and the eye resumed its normal position.

Before entering upon affections of the cornea, I would like to say that in the *interstitial form of keratitis*, due to inherited syphilis, I have found mercury of comparatively

¹ Paper read before the Clinical Society of Manchester, February 21st, 1888.

little use. I have often tried it, but have been almost invariably disappointed with the results. Mr. Jonathan Hutchison speaks well of the use of hydrarg. c. creta. in one grain doses thrice daily.

In Descemetitis—i.e., deposits of flakes on Descemet's membrane—i.e., the posterior corneal layer often associated with, and due to deeper-seated diseases of the iris, and choroid; mercury is of signal service, and, in some cases, it acts with extreme rapidity as in the following case:—George W—, æt. sixteen, first seen September 11th, 1886. He said his vision was quite good up to a fortnight ago. At date, vision in right eye $\frac{1}{8}$; well-marked coarse deposits on Descemet's membrane; choroiditis; and recent exudation above the optic disc. Ordered pil. hydrarg., gr. 3, thrice daily.—On the 25th, the deposits on the cornea and the retinal effusion had entirely disappeared, and the vision quite normal.

Iritis with Descemetitis.—Chas. W—, æt. seventeen, Huddersfield, admitted an in-patient to the Eye Hospital on December 7th, 1887. Right eye inflamed two years ago; got better, but was inflamed again one year ago; no history of gout or syphilis. Left eye normal in appearance, and vision. Right eye small patch of punctated keratitis; pupil irregular; numerous synechiæ posterior. Details of fundus cannot be satisfactorily examined; vision, $\frac{1}{8}$. Ordered pil. hydrarg. and mist. pot. iod.; atropine.—December 17th. Fewer adhesions; vision, R.— $\frac{5}{8}$. On February 3rd, 1888, I saw him again: vision in both eyes normal, and Descemet's membrane quite clear.

I shall enumerate several cases of *affections of the iris*, as we have in mercury a valuable aid in their treatment. In all cases of iritis the surgeon should endeavour by the frequent instillation of atropine (four grains to the ounce of water) to dilate the pupil fully. If the attempt be successful in the course of a few days, atropine alone will complete the cure; but if not, it will be necessary to administer mercury in some form or another. The plan I personally prefer, where it can be adopted (and by this I mean where the patient can be kept in a uniform temperature, and under careful observation) is by *unction*. Either the ordinary mercurial ointment, or the oleates, may be spread on a piece of flannel, and bandaged on to the arm. Rubbing is sometimes recommended, but it may produce irritation, and considerably impair the absorbing power of the skin. This plan of administration is much less liable to disagree or produce unpleasant sensations and digestive derangements than by giving it internally. I know of no proof of the direct action of a drug similar to that of the action of mercury on iritic adhesions, if not of too long standing. Atropine by its aid seems to break down one tag after another, until the pupil is dilated equally all round. As soon as the adhesions are completely broken down, or even before, if the gums are tender, the mercury should be stopped, and iodide of potassium substituted, and if necessary, mercury may be afterwards resorted to.

Syphilitic Iritis.—Sarah McL., æt. 35, admitted as an in-patient, Bolton Infirmary, October 19th, 1886. She said her eyes were quite strong up to ten days ago, when they became very dim and foggy. She had had a syphilitic rash for four months, and sore throat. At present her vision is very bad, and she can scarcely see her way about. On examination well-marked iritis in both eyes; the iris is muddy, and its structure masked by the abundant exudation; the pupillary space seems filled with uveal pigment; adhesions all round, and atropine has but little effect in

dilating the pupil. Immediately after her admission she was ordered perchloride of mercury in large doses, as she had also taken mercury before her admission.

In less than a week there was slight salivation, and evidence of one iritic adhesion after another giving way. December 16th—i.e., less than a month after her admission—every trace of iritic adhesion had disappeared, iris seemed natural in colour, no vitreous opacities. Vision R. and L., with correcting glasses, normal. She was sent home and ordered iodide of potassium.

This case is a typical example of the value of mercury in this frequent affection; but it is the experience of all ophthalmic surgeons that cases of syphilitic iritis that are not diagnosed early, and put under anti-specific treatment, go on to complete annular synechiæ, develop glaucomatous symptoms, and result very badly.

Janet F., æt. twenty-five, admitted as an in-patient at the Eye Hospital, December 13th, 1882. She gave the following history: She was confined on the 2nd of August, 1882, and for six weeks prior to that date, she had been out of sorts, but had no spots on the body—no sore throat. Three days after her confinement spots came out all over her body; she had severe sore throat, and noticed an alarming falling off of her hair. The baby was quite clear when born, but when about two months old she noticed some purple spots, especially on the buttocks. Last September she began to be troubled with her eyes, suffering from severe pain and dimness, and inability to bear the light. At that date there was deep conjunctival injection in both eyes. Iris muddy; extensive synechiæ, which did not give way in the least after the frequent instillation of atropine for three days. Fundus oculi cannot be detected on account of the hazy media in both eyes. Vision in R. and L. $\frac{6}{8}$ scarcely. She was ordered mercurial inunction on the day of her admission, and in a week slight salivation was noticed, and the following notes made: Right eye—pupil fairly dilated all round; Left eye—extensive adhesions. Patient looks much better. Mercury stopped and iodide ordered.—December 27th. Vision: R. eye, $\frac{6}{8}$, i.e. normal, iris clear, pupil wide; L. eye, $\frac{1}{2}$, iris clear, still a few adhesions. Patient looks quite well, and expresses herself as feeling quite a “new being.” Spots on body completely disappeared.

Recurrent Iritis—Condyloma—Recurrent.—Mrs. P., æt. thirty-one, consulted me on the 29th of December, 1883. She said the left eye had been bad since September, and that she thought she had caught the ophthalmia from the children at her school. The sight was fairly good up to the first week in December. When I saw her—Vision: L. eye, $\frac{6}{8}$. I could detect a large condyloma below encroaching on the pupil. Vitreous hazy; iris muddy. Ordered gtt. atrop. and ung. hyd.—January 14th. Condyloma has disappeared, pupil dilated, no pain; vision normal. Ordered mist. pot. iod. She came back again on the 2nd March, 1884, and said she had a cold on her journey home. Vision: left eye counts two fingers; pupils fairly dilated, but media very hazy. Ordered hydrarg. perchlor. and pil. hyd. iod. vir.—March 14th. Abundant adhesions (synechiæ posterior); cannot see retina; vision 19 Jäger vix. Mercury pushed to salivation, which occurred on March 28th, and at this date I ordered syr. ferri iod. and ext. sarsæ liq.—August 23rd. A few synechiæ; O. nerve healthy; no pain; no active inflammation. Vision normal, $\frac{1}{6}$, and has remained so up to now.

In this case I never succeeded in getting an admission of syphilis, but I had not the slightest doubt of it, and I

consequently pursued the treatment on the right lines, and obtained satisfactory results. This case points to the necessity of *prolonged* treatment and watching, and that it is necessary to be guarded when we are asked if there be any danger of recurrence.

Iritis—Retinitis.—Ellen W., æt. twenty-six, of Padiham, first consulted me on the 2nd of December, 1882. Two years previously she had severe inflammation in both eyes, and was attended to for some time by a local doctor. Was an in-patient at the Eye Hospital for twelve months, and had undergone a double ireductomy. She has had no active inflammation since, up to date (December, 1882); but her sight has been getting gradually worse, and she has been told that nothing more could be done. On examination I found evidence of retinitis in both eyes, and although I could get no admission of specific inoculation (Vision: R. 16 J.; L. 20 J.) I ordered her large doses of Donovan's mixture, and the vision in less than a month improved to R. $\frac{6}{60}$; L. 19, and her health was improved. —March 31st, 1883. Vision same in L.; R. $\frac{6}{60}$ c. + 4d. = 1 J. Vision kept moderately good up to March, 1887, when she came again with both eyes very bad. Vision: R. perception; L. 20. I ordered her ung. hydrarg. and used it to salivation. Vision improved to R. 20 J., L. 16 J.

I have seen her again just lately (December, 1887) and in spite of all treatment her vision has gradually deteriorated, and now she can scarcely see her way about, and the tension is below normal in both eyes.

This case presents several features of interest. At first, and for some time, it shows a decided improvement under mercurial treatment, but it further illustrates the necessity of watching our cases for a long time before giving a too-decided prognosis.

Retinitis.—Emma S. æt. 41, Oldham, first attended at the Eye Hospital on the 30th of September, 1881. She said she had been in good health up to two years ago, when she began to suffer from very severe headache, which had been growing worse lately. No history of syphilis, no sore throat, no spots. Vision: R. 1 J. $\frac{6}{12}$; L. 20 J.

Ophthalmoscopically—the retina in both eyes was very hazy; margins of optic nerves fairly well-defined. Ordered ung. hydrarg. externally, and mist. quin. et ferri internally. On the 8th November, 1881, the retinæ were clear, headache entirely disappeared, and vision quite normal.

I have seen many cases of simple retinitis recover very rapidly under the influence of mercury carefully administered.

Neuro-Retinitis, Syphilitic.—Ann P., æt. thirty-seven, first attended at the Eye Hospital, November 30th, 1881. She had been complaining of bad sight for the past seven months, and was much troubled with black spots and floating bodies since her confinement, in May. She had suffered from sore throat, and at the time of her visit she had a copious coppery eruption over her body, and her child had shown syphilitic symptoms.

Vision R. and L. $\frac{6}{60}$. Ophthalmoscopically it was found to be a well-marked case of neuro-retinitis; margins of optic nerves ill defined, and a general haze all over the retina. There was no iritis. Ordered ung. hydrarg. externally, and iodide of potassium internally.—December 7th, 1881. Vision: R. and L. $\frac{6}{12}$, and on June 11th, 1882, when I last saw her, her vision was R. and L. $\frac{6}{60}$, optic nerves and retinæ clear.

Atrophy of the Optic Nerves following Optic Neuritis.—James D.—, æt. nineteen, admitted as an out-patient

in the Royal Eye Hospital, February 3rd, 1883. He said that he was quite well up to a few days ago, and could see well with both eyes. He felt pricking pains in both eyes, and last Tuesday—i.e., four days ago, he noticed he could not see at all with the left eye; no vomiting; no headache. He complains of stiffness and numbness of hands and feet. When walking he separates his legs, and plants them with difficulty; the staggering is a good deal worse when his eyes are closed. Tendo reflex exaggerated.

V. Right; 19 J. vix. } Well marked optic neuritis in Left; fingers at 4 inches } both eyes; veins engorged, arteries small; optic nerves woolly, with ill-defined margins. Ordered potass. iod.—February 14th, 1883, he was admitted an in-patient. Pupils active and normal in both eyes. Optic neuritis not so marked; veins engorged: discs irregular in their outline. Vision: R. 14, L. 16 J.—February 21st. R. $\frac{12}{60}$, L. 14 J. Tendo reflex highly exaggerated; also ankle clonus.—February 28th. Vision: R. $\frac{1}{18}$, L. $\frac{14}{60}$.—March 7th: left hospital; both optic nerves look pale; no neuritis. I lost sight of this case entirely until the 17th of February, 1887, when he was again admitted as an in-patient at the Eye Hospital, when he reported that since we saw him before, the sight in both eyes had varied greatly. At this date both optic nerves were pale and atrophic; slight choroiditis at their outer margins; vessels good size. Fields for white contracted; fields for red much contracted; especially in the right eye. Vision: R. + 4d = $\frac{6}{24}$, L. J. 20 vix. Ordered perchloride of mercury and iodide of potassium.—March 19th, 1887: R. $\frac{6}{60}$, L. $\frac{6}{60}$.—February 10th, 1888. I sent for him, and made a complete examination. Vision: R. $\frac{6}{12}$, L. $\frac{6}{18}$; optic nerves quite pale and white. He has had no attacks for a year. Fields still contracted.

Atrophy of Optic Nerves. Ptosis and Paralysis 3rd Nerve.

—Lewis G.—, æt. forty-five, admitted an in-patient to the Eye Hospital on October 7th, 1885. History: The sight of both eyes has been failing markedly for three years, and getting gradually worse. No admission of syphilis. Palms of hands and fingers show some fissures, and appear moist and scaly. Tendo reflex good. He has been a heavy smoker. Vision: Right eye, 20 J. vix. Optic nerves pale and atrophic, especially at outer part. Left eye: Entire absence of movements inwards; also of direct movements upwards and downwards. On attempting to look upwards the eye is moved slightly up, but it also rotates inwards; and in attempting to look down the eye is slightly rotated outwards. Vision, left eye: shadows. Optic nerve paler than the right. Ordered ung. hydrarg. to be pushed.—October 21st, 1885. Signs of salivation. Vision: R. 6 n4, L. 19. At this time the fields of vision were carefully taken by Mr. Roberts, the house surgeon. Right: Field for white considerably contracted all round; field for red much contracted; central scotoma of considerable size. Left: Field for white much more contracted than right; field for red slightly larger; central scotoma of equal size.—November 7th, 1885. Vision: R. $\frac{6}{60}$, L. $\frac{6}{60}$.—December 20th, 1885. Stopped hydrarg. Vision: R. $\frac{10}{12}$ 6 J., L. $\frac{6}{60}$. Field again taken. No central scotoma in right, and in left only a very small central scotoma for red, but not for white. Green called white in both eyes. Not much difference in the appearance of optic nerves. This patient wrote lately to say that his vision had further improved since I last saw him, and that he had been able to follow his employment, although at one time before I saw him he had given up all hopes of ever being able to do so.

Atrophy of Optic Nerves.—Thomas D—, æt. twenty-two, admitted as an in-patient, Eye Hospital, July 11th, 1882. History: He came as an out-patient on May 13th, 1882, when he said his vision was quite good up to two months ago. A fortnight ago he noticed that the left eye was the worst. He has smoked one ounce of thick twist a week, and drinks beer, but not to excess. History of syphilis (hard chancre) eight years ago, but has felt no evil results since. His vision then was, R. $1\frac{6}{8}$ —i.e., normal, L. $4\frac{6}{8}$.—June 24th. R. $\frac{6}{8}$, normal; L. 19 J. Ophthalmoscopically: Left optic nerve very pale. Ordered mist. quin. et. strychn. On admission as in-patient his vision was—R. shadows; pupil active; signs of incipient atrophy of nerve. L. 19 Jager; pupil active; optic nerve pale and atrophic. Ordered mercurial inunction. In a week salivation. Mercury stopped and iodide ordered.—August 2nd. Vision greatly improved: R. and L. 4 J., $\frac{6}{8}$.—August 11th. House surgeon notes discs pale, vessels small. Vision: R. $1\frac{6}{8}$, L. $1\frac{6}{4}$.

Optic Neuritis with Hæmorrhages.—John M—, æt. forty-nine, first attended the Eye Hospital on January 19th, 1884, when he gave the following history: His sight was good up to six months ago; since then gradually failing; no pain in head; no vomiting; no loss of memory; no staggering gait. Two children living and healthy. Pupils fairly active. Ophthalmoscopically: some vitreous haziness in both eyes. Right eye: Blurring of disc and surrounding retina; apparently not much swelling of disc, but almost complete obscuration of edges; one hæmorrhagic spot on the inner side. Left eye same, but no hæmorrhages. Vision: R. $\frac{3}{8}$ vix, L. $\frac{3}{8}$. He was ordered ung. hydrarg. and iodide of potassium by Dr. Mules, under whose care he was at that time; and by February 27th, 1884, his vision had improved: R. $\frac{6}{8}$, L. $\frac{6}{8}$ vix. On March 6th, 1884, there was a large membranous opacity in the right vitreous. Left vitreous clear; still swelling of disc and opacity of surrounding retina. On December 13th, 1884, he came under my care, when I noticed that both discs and surrounding retinæ were hazy. No hæmorrhages. Vision: 19 J. both eyes. Ordered Donovan's mixture.—February 18th, 16 J. R. and L. At this date ordered mist. hydrarg. perchlor. Vision continued same.—March 10th, 1885. Gave mist. Donovan. Vision at this date R. +6=9; appearance of optic nerves healthier.—January 10th, 1885. Vision: R. 18 $\frac{6}{8}$, L. 18. Still films in vitreous. The result in this case is by no means brilliant; but I believe the use of mercury in various forms prevented the nerves becoming completely atrophied.

Choroiditis Disseminata.—Owen J—, æt. forty-nine, of Beaumaris, consulted me on the 4th of December, 1881. He said that he had had "slow fever" a year previously, and had been in bad health, and this led me to suspect its syphilitic origin; he had seen things double, and could see better at twilight, and could not retain retinal impressions for any length of time. Field of vision much contracted all round in both eyes. He has not been a heavy smoker. Ophthalmoscopic examination revealed:—Right eye, a large atrophic patch in region of yellow spot; Vision: 16 Jager scarcely. Left eye, extensive choroiditis, with numerous exudations, and a few small hæmorrhages, and patches of pigment. Although I could not get any history of syphilis, I inferred it, and ordered ten-grain doses of potass. iodid.—November 23rd, 1881. Saw again; vision in left eye slightly improved, L. $12\frac{6}{8}$. I determined then to try mercurial ointment. He continued with this until February, 1882, where slight salivation

occurred, and his vision then was, R. 16; L. $10\frac{6}{8}$, c.+4d.=6 J. As he was now in a low general condition, I ordered him maltine, and cod liver oil, and strychnine, and by March he had gained six lbs. in weight, and had entirely got rid of his feelings of depression and nervousness. For three months longer, tonics and mercurials were prescribed alternately, and when I saw him last on the 11th of October, 1882, he had gained ten lbs. more in weight, i.e., sixteen lb. since I first saw him a year previously. The vision in the worst eye, the Right, had improved to 14 J., $\frac{6}{8}$; Left eye, $\frac{1}{8}$, c.+4d.=1 Jager easily. This gentleman had been under skilled treatment for more than a year before I saw him, and his vision went gradually worse. I attribute the success entirely to the detection of the cause, which was undoubtedly somewhat obscure.

Central Choroido-Retinitis-Macular.—Amy McC—, æt. thirteen, Manchester, first seen as an out-patient, Royal Eye Hospital, June 26th, 1886, then her paper was marked amblyopia, with correcting glasses= $\frac{6}{8}$, after atropine +2d.= $\frac{6}{8}$. R. and L. sight bad for six months.—January 30th, 1886. Peripheral fields, with fingers contracted R. and L. (tested with fingers), with +1d. sph.= $\frac{6}{8}$; no retinal change detected.—July 3rd, 1886. Again seen, but no retinal change noted. She went to London, and was seen by Mr. Couper, at Moorfields, on the 27th of July, 1886, when her vision was marked R. and L. 20—sees hand. Glasses do not improve. The following notes I copy from the paper sent with her from London: Left eye; greyish change and ædematous halo round the macula; atrophy of pigment at macula; fine granular change very marked at fovea. Right eye, ditto. She was ordered syr. ferri iod. and pulv. hyd. c. cret., gr. $\frac{1}{2}$, twice a day. August 24th, 1886. Vision: R. and L. $\frac{6}{8}$; ordered gr. i. of the hyd. c. cret.—September 7th, 1886. R. and L. $\frac{6}{8}$, c.+1d.= $\frac{6}{4}$ nearly. Left macula change less easily seen. Right, also; but halo still visible. She then returned to Manchester, and I saw her on the 15th of September, 1886, when the condition was as described by Mr. Couper. Ordered her to continue with the hyd. c. cret.—December 28th, 1886, c.+1d.= $\frac{6}{8}$ R. and L.—May 24th, 1887. Left off treatment. Vision quite normal in both eyes; no ophthalmoscopic changes can be detected.

Central Choroiditis with Retinitis.—Arthur C—, æt. twenty, Romiley, admitted as an in-patient, Royal Eye Hospital, on the 23rd of October, 1887. He is by occupation a clerk. He says he does not remember seeing very well with the Right eye, and the Left has been failing him for the past ten weeks. He has no headaches. Health not strong, but he has not complained of any special disease. No history of syphilis. Ophthalmoscopic examination: Right eye, a small crater-shaped central choroiditis can be detected. Vision: $\frac{6}{8}$. Left eye: optic disc blurred; margin indistinct; small patch of choroiditis, with a few retinal hæmorrhages. Vision: $\frac{6}{8}$. Ordered ung. hydrarg. November 12th, 1887. Vision same; less choroido-retinitis in left eye.—November 19th. Vision improved in both eyes: R. $\frac{6}{8}$, L. $\frac{6}{8}$.—November 26th. Vision relapsed to R. $\frac{6}{8}$, L. $1\frac{6}{8}$. Ordered perchloride of mercury internally. Saw again February 3rd: R. $\frac{6}{8}$, L. $\frac{6}{8}$. Fundus clearer.—February 10th, 1888. Vision R. and L. normal. The atrophic patches can still be discerned on both retinal, and he continues under treatment and observation.

I must express my indebtedness to the house surgeons at the Manchester Eye Hospital and the Bolton Infirmary for their careful record of the cases under my care, and I hope that the interesting group of cases now presented will be of service as commentaries to my professional brethren.

DYSMENORRHOEA.¹

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DYSMENORRHOEA is the function of menstruation performed with difficulty and pain, and is more important than most disordered functions, in that it may carry with it a train of gastric, cerebral, and nervous phenomena, as distressing as the pain itself. It is a *symptom*, not a disease. To remove the symptom, we must find and remove its cause. The *pain* is common to all cases; its site, character, time of onset, duration, with the reflex phenomena and the previous history, may all vary according to the *causation* of that pain.

In the consideration of this subject so much depends upon the circulation of the uterus, that I must here devote to it a small space. The uterus is supplied from the abdominal aorta and internal iliac by means of the ovarian and uterine arteries, which run towards the fundus and cervix, between the layers of the broad ligament on either side of the uterus. Just before reaching that organ, they run downwards and upwards, *outside* and along the whole length of its long axis to anastomose. From these two main resulting vessels, a series of double branches jut out, penetrating through the muscular layer of the uterus into the sub-mucous layer, there forming complete circles, from which twigs are given off into the deep and decidual layers of the mucous membrane. This rather peculiar vascular supply explains the fact that acute, often congenital, antelexions may be unsymptomatic and free from congestion; for it is clear that so long as the main arteries and veins, which we have seen to be external to the uterine tissue, are not interfered with, a ligature even, applied round the uterus, would not arrest its circulation either above or below. It explains also the fact that backward displacements of the uterus, *with descent*, produce more or less severe congestion; for here the fundus uteri, together with the broad ligaments containing the vessels, gets grasped by the sacro-uterine ligaments, which then assume the function of the neck of the sac in an intestinal hernia, necessarily causing much interference with the arterial, and especially with the venous supply.

Menstruation.—In whatever way menstruation is influenced by ovulation, it is preceded by a determination of blood to the sexual organs, which causes their temporary hypertrophy, influencing, moreover, such distant organs as the mammae, and even the thyroid glands. The larger these organs are during the inter-menstrual periods, the greater will be their relative hypertrophy, as one may see in fibroid tumours of the uterus, in prolapsed ovaries, in adenomatous mammae, and in goitrous thyroids. During the preliminary engorgement stage, the mucous membrane becomes swollen and thrown into folds, and the mucous glands secrete abundantly, producing more or less leucorrhœa. Hæmorrhage, from rupture of the small capillaries in or beneath the thin upper or deciduous layer of mucous membrane, soon follows.

Causes of Dysmenorrhœa.—These are, roughly, local and constitutional, though both sets of causes may be present. Successful treatment necessarily depends upon tracing

back the symptom—the dysmenorrhœa—to its origin. The local causes may be divided into the following groups:

- | | | | |
|-----------------|-----------------------------|-------------------------|-----------------------|
| LOCAL. | { | 1. Spasmodic (? local). | |
| | | 2. Obstructive | { Stenosis (organic). |
| | | | { Displacements. |
| | | | { Fibroids. |
| 3. Inflammatory | { Altered uterine contents. | | |
| | { Uterine. | | |
| | { Tubal. | | |
| 4. Congestive | { Ovarian. | | |
| | { Peri-uterine. | | |
| | { Primary. | | |
| | | { Secondary. | |

Our first heading is the so-called *spasmodic dysmenorrhœa*, which may be quite independent of either local or constitutional disease, and is then probably of the nature of a neurosis. In other cases it may be accompanied by, and perhaps caused by mechanical obstruction, or inflammation, or the irritating presence of a fibroid, and thus seriously aggravates the dysmenorrhœa due to those conditions, just as spasm of the bronchial tubes aggravates bronchitis. Some call this form “neuralgia”; others do not believe that these painful contractions—“uterine colic,” or “uterine cramp”—can occur apart from obstruction, and they would accordingly combine this with the “obstructive” form of dysmenorrhœa.

Spasmodic dysmenorrhœa is one of the commonest—often the most painful, and when uncomplicated by organic changes, and of recent date, is fortunately one of the easiest forms to cure, though some long-standing cases obstinately resist all treatment. It is due to painful contraction of the hollow uterine muscle, and may accordingly be either clonic, “come and go,” producing intermittent pains, or tonic, producing incessant pains. These painful contractions are not due to the uterine muscle contracting to expel its contents, but are purely spasmodic, and in a really typical case occur when the uterus is empty, and are then more severe than even the obstructive pains of membranous dysmenorrhœa. They resemble, in fact, the severer form of “after-pains,” of which there are two main types, so well studied by Matthews Duncan. The least severe and least prolonged, always clonic “after-pains,” are those where a piece of retained placenta or clot is the exciting cause, the pain ceasing when this is expelled. The most severe and most prolonged, usually tonic “after-pains,” occur when the recently-emptied uterus goes into the most violent contractions, without any such object in view. We give ergot to aid the uterus to expel its contents in the first form, and sedative in the second form to allay the spasms. These spasms or cramps of the uterine muscle are the main causes of the partial or entire detachment of the decidua menstrualis in membranous dysmenorrhœa, and by curing the former we usually cure the latter. Spasmodic dysmenorrhœa comes on usually at puberty, and may in time, as the constitutional tone improves, wear itself out, though it may become more severe, especially if an unfruitful marriage ensue, leading then to organic changes, with other super-added forms of dysmenorrhœa.

The pain always precedes the menstrual flow, sometimes by ten days or a week, being usually most severe just *before* the flow begins, diminishing as it appears, and ceasing at the end of the first or second day. This proves that the dysmenorrhœa is not due to obstruction, for then the more there was to pass, the worse would be the pain, whereas women constantly declare that they have most pain when they have the least flow (unlike obstructive dysmenorrhœa).

¹ A Post Graduate Lecture, delivered at Charing-Cross Hospital, on January 6th, 1888.

Thus it happens that when spasmodic and obstructive dysmenorrhœa co-exist in the same patient, we may have the pains, due to the former, ceasing as the flow appears, followed by a few hours, or a day or two, of freedom from pain, to be followed again by the "come and go" pains, due to obstruction to the exit of blood or clots. The pain sometimes simulates peritonitis, but this is easily negated by the apyrexia. During the progress of the pain it is easy to prove the absence of obstruction; for at the very acme of the pain, a few hours before the flow appears, a bougie, No. 7, 8, or 9, will pass easily along the whole length of the uterine canal. Emmet has shown that of married women who originally had spasmodic dysmenorrhœa, 71.6 per cent. are sterile—a very important fact, showing the need for treatment, when we consider that the worst cases do not marry.

Obstructive Dysmenorrhœa.—Barnes say: "For menstruation to occur easily and healthily, the genital canal, from its commencement at the fimbriated extremities of the fallopian tubes to the vulva, must be pervious." Any such obstruction, though constantly present, may only produce discomfort as the periodic metrostaxis comes round. Obstructive dysmenorrhœa in its typical form comes on *immediately* before or simultaneously with the first external manifestation of the metrostaxis, or it may be delayed till sufficient blood is poured out to make the obstruction a real one. I cannot here allude to the necessity or avoidance of local examination, but it is obvious that in obstructive dysmenorrhœa a correct diagnosis can only be thereby obtained. Where, however, we have reason to believe the patient is a virgin, we may examine first per rectum, previously intimating our intention to the patient; and though such an examination is very unpleasant to the patient—and, indeed, to the examining physician—one's object is appreciated. We can thus make out the position, mobility, and size of the womb, and often the condition of the ovaries and broad ligaments. If necessary, a vaginal examination can then be made, and the state of the cervix and endometrium explored. If the hymen be unyielding, an anæsthetic may be required.

Displacements of the womb and ovaries may occasionally produce dysmenorrhœa, though their importance has been till lately too much dwelt upon. This is mainly due to the fact that when patients complaining of dysmenorrhœa are examined, it is found that in many cases the uterus is deviating from its normal anteverted position. To make my meaning clear as regards the true significance of ordinary flexions, I will suppose that a patient comes with a long train of subjective symptoms, inclusive of dysmenorrhœa, and that on examination we find a retroflexed womb. We assume this is the cause, and insert a well-fitting Hodge pessary, which did two things—viz., kept the uterus at rest, and kept it at a higher level; and we may have thought, erroneously again, that it was going to do a third thing—viz., to turn the retroflexion into a normal anteversion. After some time, if we are fortunate, our patient is cured of her subjective symptoms, and we remove the pessary, and examine again, and find the uterus with exactly the same flexion as regards its own component parts, but—and this is the secret—that the uterus is higher up in the pelvis, disengaged, in fact, from the sacro-uterine ligaments, and thus relieved of its congestion; and so long as this level is maintained, all will be well, but as soon as the womb sags down again, and becomes again congested, all the old troubles will recur. It will thus be seen that flexions *per se* rarely cause obstruction, but that

when accompanied by prolapse, congestion often ensues. Dysmenorrhœa, therefore, due to displacements would be better considered under congestive dysmenorrhœa.

There is, however, one class of uterine flexions productive of obstructive dysmenorrhœa. I allude to supra-vaginal flexions, where the angle or curve is above the vaginal portion. A flexion of the cervix only may be, and often is, associated with sterility; but even then, not always with dysmenorrhœa. This supra-vaginal flexion tends to obstruct the canal, just as any bent tube offers more obstruction than a straight or moderately-curved one. Clearly, also, the more solid the *uterine contents* are, whether they be clot or decidua, the more difficulty will they encounter in adapting themselves to the altered curves. Some of the opponents of obstructive dysmenorrhœa have likened the curve at the angle of flexion to the bend of a river which offers little or no opposition to the easy flow of the water, but if the river be narrow and the bend acute, a large semi-solid body floating in the liquid stream would find it difficult to get round the corner. The pain in obstructive dysmenorrhœa is due to the mechanical dilatation of the canal, and is directly proportionate to the resistance offered by the uterine tissues to the contents passed. This is well seen in membranous dysmenorrhœa, where, after some preliminary ante-menstrual pain of the spasmodic type, there may be an interval of repose, followed by severe pain, which begins gently, increases to a maximum, and then as each shred passes, dies away again almost suddenly. To ascertain the existence and exact position of real obstruction, whether due to supra-vaginal flexion, organic stenosis, or to other causes, a bulbous-ended bougie must be passed beyond the seat of stricture to the fundus, observing how far it enters, and how far it is withdrawn before the bulb catches. As the bulb passes through the constricted portion, the same pain will be experienced as at the menstrual period.

Fibroids, again, may cause obstruction by narrowing or twisting the canal, by favouring displacements; or may, by causing menorrhagia, tend to the formation of clots, which pass with difficulty. They may also cause congestion by pressure on the trunks in the broad ligaments. Occasionally, they cause irregular or inefficient uterine contraction, or acting as foreign bodies, may cause painful spasmodic contractions of the entire muscle.

Inflammatory Dysmenorrhœa.—When the pelvic organs become inflamed, whether it be endometritis, metritis, salpingitis, or ovaritis, we must expect either the arrest or the disarrangement of such part of the function of menstruation or ovulation as is respectively performed by them. It is impossible to here allude to these conditions in detail, beyond saying that both in acute and chronic inflammation the symptom—dysmenorrhœa—with which we are now concerned is only one of a group of symptoms, which differ according to the organ at fault. Chronic metritis is often the result of subinvolution, and is often present when least expected, its onset being insidious. Salpingitis is only now receiving due attention, one fairly constant early symptom being an intractable menorrhagia. Adhesive peritubal peritonitis causing interference with the peristalsis of the tubes, or constriction of their canals, also produces tubal dysmenorrhœa, which is said to be clonic in type, but of which nothing very definite is known. It is necessarily always associated with sterility if the occlusion is complete and bilateral.

Ovarian Dysmenorrhœa, or dysootocia, as Barnes has called it, is a very common and very painful form. The

term means that the process of ovulation is performed with difficulty and pain. It may either precede, accompany, or follow the menstrual flow. It is produced whenever the maturation or ripening of the ovum, with coincident enlargement of the Graafian follicle, is prevented by acute or chronic ovaritis, or by cirrhotic or other structural changes, and also whenever the ripened ovum is prevented from escaping by peri-oöphoritis having caused thickening of the fibrous or peritoneal coverings of the ovary. Amongst other frequent causes of dysotocia are ovaries which have prolapsed downwards into Douglas' pouch, either from congestion or early cystic change adding to their normal weight, or from falls, or superincumbent pressure, or from being dragged down by a retroflexed or retroverted fundus uteri, or contracting retro-uterine adhesions. One ovary only (usually the left) may be at fault, the other being normal and normally situated, producing dysmenorrhœa at alternate periods. The pain varies in character, being aching or shooting, and is referred to both the original and altered position of the ovary if prolapsed, and is accompanied with more or less coccygodynia, dyschezia, dyskinesia, dyspareunia, and bladder irritation. This form of dysmenorrhœa simulates that of acute ovaritis or peritonitis, the pulse running high from the nervous hyperæsthesia present, but the thermometer reveals no more pyrexia than is usually present at the onset of nearly every normal menstruation. Physical examination is difficult during the pain—so tender are the abdomen and pelvis, and so rigid the parietes; but after it has subsided, the ovary will be felt enlarged (unless cirrhotic), lying low, and exquisitely and characteristically tender.

Peri-uterine Inflammation.—In such cases, with effusion of lymph, serum, or pus, the pelvic organs are at first pushed away from their normal position, and as a rule fixed; but afterwards, as the effused material becomes absorbed, they gradually not only resume their position, but are often drawn over by the contracting adhesions till they occupy the position previously held by the inflammatory products, and, what is worse, may be fixed there. Thus the fundus uteri or ovary may be bound down to the bottom of the pouch of Douglas, or bands of lymph may constrict one of the tubes, or exert pressure on the venous trunks in the broad ligaments. What more natural than that dysmenorrhœa should result from the fixation of such viscera, whose contractile powers become hampered, their curves altered, and their circulation impeded?

Congestive Dysmenorrhœa may be primary or secondary. If *primary*, it predisposes to prolapsus. It may result from shock, exposure, or protracted fatigue, especially that due to pedal sewing machines when used at or prior to the menstrual period. *Secondary* congestion may be due to inflammation, fixation, or displacement of either uterus or ovaries, or to cardiac, hepatic, pulmonary, or renal disease, then merely forming a part of the general venous congestion, and, indeed, in such cases metrostaxis may relieve the whole system, acting as a safety-valve. The type of dysmenorrhœa here is inconstant as regards the kind of pain, but its being grouped with the signs characterising congestion make it distinctive. Sometimes the pain simulates spasmodic dysmenorrhœa, *i.e.*, ceases as soon as the flow becomes established, being then doubtless due to a temporary stenosis resulting from the swollen and engorged mucous membrane, which being relieved by the general oozing from its free surface, becomes less swollen, and allows free exit to the uterine contents.

(To be continued.)

INFANTICIDE: AN INQUIRY INTO ITS CAUSES, AND THEIR REMEDY.

BY FRANCIS VACHER, F.R.C.S.,

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IN Addison's "Vision of Mirzah" is described the bridge of human life standing in the midst of the tide of eternity. "Innumerable trap-doors lay concealed in the bridge, which the passengers no sooner trod upon but they fell through them into the tide, and immediately disappeared." It was noticed also that "these hidden pitfalls were set very thick at the entrance of the bridge."

Under this beautiful figure attention is drawn to the uncertainty of life at all ages, and especially to its uncertainty among those to whom life is a new gift, and who should hold it firmly.

A simple child,
That lightly draws its breath,
And feels its life in every limb,
What should it know of death?

The question, "Why do little children die?" is one deserving of grave study. Let philosophers and physicians try to solve it! The answer is to be had for the seeking. The waste of infant life is enormously in excess of what one might expect in a civilized community. Year by year about a quarter of those who die in England and Wales are under one year of age; and the proportion of infantile deaths to births is upwards of fourteen per 100. And what are these infantile deaths ascribed to? The main causes as certified, or entered in the registers, may be grouped under the following heads:

Febrile Diseases.—Measles, scarlatina, diphtheria (including croup), and whooping cough.

Bowel Diseases.—Diarrhœa, gastritis, enteritis.

Lung Diseases.—Bronchitis, pneumonia, congestion of the lungs.

Convulsions.—Cephalitis.

Hereditary Disease.—Syphilis, scrofula, tuberculosis.

Premature birth and malformations. Teething. Atrophy and debility. Suffocation.

This classification is not strictly scientific, but convenient. Having thus the chief causes of the deaths of infants, let me briefly consider them. Are they preventable causes? Do they suggest neglect, or worse? Do any of them imply infanticide?

As regards febrile diseases, though the local authorities may do much to suppress them, or at least to limit their spread, the individual householder cannot bar them out, but he may often by careful treatment of a case prevent a fatal termination. Bowel diseases and lung diseases affecting infants are largely due to improper food and unwholesome water, to insufficient clothing, cold, and neglect. In the subjects of lung disease especially, the neglect is often so marked as to be the obvious cause of the malady, and inasmuch as the neglect continues till death, the parents or guardians of the deceased are constructively guilty of infanticide.

Convulsions I regard rather as a symptom than a disease. Deaths of infants ascribed to convulsions, cephalitis, and meningitis, are probably, with only a small proportion of exceptions, due to congenital taint, and might be grouped with deaths from hereditary diseases. Prematurity and malformation are doubtless sufficient causes of deaths, but the truthfulness of the record so far as premature birth is

concerned is discredited by the fact that this death-cause is so often not vouched for by any qualified medical practitioner. When it is duly certified, nothing is stated about the cause, which is often parental syphilis, or intemperance. A considerable proportion of the deaths of infants which take place during the period of teething are ascribed to teething. The prominent symptom is commonly convulsions, and there is little doubt that the primary cause of death is often hereditary disease.

Atrophy and debility, marasmus, malnutrition, inanition of infancy, are such general terms, that they are almost necessarily used as a ready cover for ignorance. Among uncertified deaths the favourite causes assigned by persons giving information to the registrars are debility, convulsions, and premature birth. The causes of so-called atrophy and debility are hereditary disease, improper food, starving, and drugging. The parents or guardians of many of the children whose deaths are referred to these causes are certainly guilty of constructive infanticide, or worse. The last of the chief death-causes of infants, according to the Registrar-General, is "suffocation." What does that mean? It means in most instances overlying—reckless mothers in the heavy sleep of intoxication smothering their babes. Infanticide, again!

What then are the ailments and "accidents" that kill (*i.e.*, the death-causes) during the first year of life? If one except the miasmata, malformations, a large proportion of the deaths ascribed to premature birth, and the results of cold catching, not always avoidable or remediable, they are mainly: 1. Hereditary congenital disease (syphilitic, scrofulous, or tuberculous). 2. Diseases and casualties, the outcome of neglect, ignorance, and wilfulness, or worse.

It is quite impossible to estimate with even proximate accuracy what proportion of the infantile mortality is due to hereditary disease, and what proportion to neglect, etc., more or less culpable. However, so large is the gross number of infantile deaths every year, that I am tempted to make a rough computation of the annual mortality from these two causes together. The number of deaths of children under twelve months old is about 129,000 a year. About 9,000 may be put down to miasmata; about 17,000 to premature birth and malformation; and about 24,000 to so-called unavoidable diseases. This leaves 79,000 due to hereditary diseases, or neglect, or both, many being obviously due to homicide—*e.g.*, a large proportion of the 1,400 deaths of infants annually ascribed to suffocation. It is to be noted also that nearly half the murders recorded are cases of infanticide—that is murders of children in the first year, generally in the first month, of life.

I should have preferred, as a basis to this paper, to have been able to state the number of deaths from infanticide for a series of years. Had I been treating of small-pox, or scarlatina, or measles, I could have given exact mortality statistics; but in the case of infanticide, just as in syphilis or intemperance, the recorded deaths are only a very small fraction of the actual deaths. I think, however, I may venture to affirm that no one who has studied the very poor, with the temptations and demoralising influences to which they are subject, will doubt that I have abundant warrant for my belief that every year, in England and Wales, the instances of constructive infanticide number many thousands, and the instances of deliberate infanticide many hundreds.

It is, of course, a painful reflection that so revolting a crime is no uncommon one. Still in this respect the

English are not worse than others. In some continental nations the crime is notoriously more prevalent than in England; and if we look to the East, or to barbarous peoples, we find infanticide is openly practised, or countenanced under conditions which often obtain. Indeed, in all ages and all lands the horrible sin of infanticide has prevailed. The nations of remote antiquity allowed it, so did the refined Grecian and the martial Roman. Travellers note that in China the exposure and drowning of infants is an ordinary custom among the poor. Infanticide is practised in Central Africa, among the aborigines in Australia, the islanders of the Pacific, and some frontier tribes of India and America. Indeed, so widespread is this crime, and so numerous are its victims, that it is reckoned by political economists as one of the checks to population. Those who desire its repression, so far as may be possible, which practically includes every humane man and woman in the community, will do well to study its causes. These I now propose to discuss. Some of the causes are common to many countries and periods; some obtain only in very limited areas, and for limited times. I purpose to refer to causes which are in operation in our own country at the present time, and to these alone. They are mainly five—viz.:

1. *Early Improvident Marriages.*—These, which many sensible people regard as deserving only of light censure, are for many a young pair the beginning of a downward career that ends in poverty, and squalor, and vice, and crime. It is gratifying, at least, to know that the mean ages at marriage are rising, and have been since 1873, when they were at their minima; but notwithstanding this, under-age marriages are still very numerous. Let me refer to the Registrar-General's returns for 1886 (the last issued). In 9,558 of the marriages in that year, in England and Wales, between bachelors and spinsters, both parties were minors. Under-age marriages appear to be most common among miners, textile hands, shoemakers, and tailors. At such callings boys and girls early learn to make a living, and so become independent of parental control. The home is often full enough, and the lads or lasses at work pay only from 1s. to 2s. a week apiece for lodgings, and "find themselves in everything." They spend their evenings as they like, and choose their own amusements and their own companions, so that their parents have no interest, pecuniary or otherwise, in keeping them. For them home becomes little more than a sleeping place, and not always a quiet place for that. It seems as if any change would be for the better, so a promise to marry is given to a chance acquaintance, met for the first time a few weeks before at a music-hall or in the street. Sometimes money for a little furniture is saved; oftener the furniture is got "on the hire system," or a start is made in furnished apartments. When the marrying in haste is over, the rueing at leisure begins. At first the joint earnings of the boy and girl are more than sufficient to provide food, shelter, clothing, and recreation; but if provident habits have not been formed, nothing is saved. Unless the young couple are exceptionally vicious or ill-tempered, they live in a fools' paradise for a few months. Then the wife has to cease work, and while the expenses increase, the income is reduced by nearly one half. Under the pressure of debt and difficulty the child-mother returns to her work, to the prejudice of her own health and her child's. Often before the first child is a year old there is a second, and the family and expenses increase year by year, out of all proportion to the income, even when the elder ones are old enough to work. How

is it possible that young parents in such circumstances should regard their family as other than a burden? The shop girl or mill-hand, if she can earn as well as her husband, can only do so by neglecting her house and her family; and if she stay at home, she lacks training for house work, and is a poor, thriftless housewife. When any of the children fall sick, she knows nothing about nursing, and she is not actuated by that earnest desire to save her child that gives the necessary knowledge to some mothers. The sick child is one of many, of too many, perhaps the weakling, and the mother is not stirred up to use all her wits, and fight death by inches for it. On the contrary, she is quite resigned to anything that may happen, and coolly tells the doctor, who blames her for sitting with folded hands, "If it's the Lord's will, perhaps it's best for the child and for me too." If this be not constructive infanticide, what is it? Yet what doctor, practising among the poor, that cannot call to mind scores of mothers of this type. Such a mother is as thorough-going a fatalist as any Turk, only she is under the delusion that she is a Christian.

And how is the evil of early improvident marriages to be dealt with? It has been suggested that the State should forbid the marriage of any man unable to furnish proof of his ability to support a wife and family; but no modern State is likely to do anything of the kind, nor is there much use expecting a remedy for such an evil in legislation. If it be possible to do anything in this matter (and who can doubt that it is possible?) it is by employers and the well-to-do generally keeping touch with the working people. From the time that lads and lasses leave school till they are of age, how little charge is taken of them! Some churches set an excellent example, keeping hold of their young people, and do a great deal to check improvident marriages. Some employers also recognise their full responsibility, and take a paternal interest in all whom they employ, especially the young. However, there is a large proportion of working lads and lasses, not especially wild or ill-disposed, who come under the influence of no church, and whose employers know nothing of them, or how they employ their time when they leave their work in the evening. After the day's dull round in the mill, there is a natural craving for recreation, and abundant amusement and exercise of a wholesome character should be provided, *i.e.*, libraries, reading rooms, concerts, gymnasia, etc. But in all young people there is also a natural craving for sympathy, and failing to obtain this sympathy at home, or from a master or mistress, they rush blindly into marriage, just to have someone to open the heart to. Now, if every working lad knew an educated man to whom he could come at all reasonable times for sympathy and counsel, and every working lass knew an educated, sympathetic woman to whom she could unburden her mind, and tell her hopes and fears, it seems to me the main motive for early improvident marriages would be removed. The friendship and confidence of artisans and factory workers is not difficult for a man or woman of tact and frankness to win; and such friendships are infinitely more blessed and useful to the educated than the vain friendship of modern society.

2. *Hereditary Disease.*—That this is one of the most important causes of infant mortality is universally admitted, but that it is also a common cause of infanticide seems scarcely recognised. A child is born, the subject of syphilis, or some form of tuberculous disease, instead of commending itself to parental affection by feeding and

sleeping well, and by its healthy appearance, it pukes, and cries, and lies awake, and looks ugly, pinched, and woe-begone. Whatever the mother gives it or does for it, it will not thrive, nay, rather grows worse; swellings appear in the neck, perhaps abscesses, ominous skin diseases begin to develop; the little body wastes, and the thin legs are always drawn up. At least one of the parents is unhealthy, and the child is the subject of mutual reproach between the parents, and of commiseration from neighbours. At first the exceptional care and attention such a child requires is not given, then it is more or less deliberately neglected; finally, it is scolded and ill-treated by day and drugged at night. When the child dies there is not even a pretence of being sorry for it, and the immediate cause of death, whatever the certificate may say, has been constructive infanticide. Of course it may be urged that of all cases of infanticide these are the least deplorable. From a utilitarian point of view, doubtless, this is so; but regarded morally, when a weak sickly child is slowly done to death by its parents, a lower depth of turpitude is reached than by the unmarried mother who, in a frenzy of shame, suddenly destroys her newly-born infant. There can be no direct remedy for this frequent cause of infanticide, for one cannot prevent the subjects of hereditary disease from marrying, even though the laws of great States, long passed away, furnish a precedent for such prohibition. The suggestion made for checking early improvident marriages is applicable. The influence of the educated over the poor, and the increase of education among the poor, will tend to make them less reckless in the matter of marriage, and, at least, teach the lad or lass having health and good character to look for health and good character when choosing a partner for life.

3. *Illegitimacy.*—Certainly a large proportion of the infants whose deaths are entered in the official register under "homicide" are illegitimate, yet these represent scarcely a tithe of the number who are killed or suffered to die because they are illegitimate. To an unmarried working woman, the burden of a child is so great as to be almost intolerable, and she is beset by temptations to destroy it. The first temptation is before the child is born, and often from the seducer, and there are herbalists and midwives, so-called, ready to perform any service for pay. Next there is the temptation of the illicit baby-farm, which Charley's Act has not succeeded in wholly stamping out. One sees advertisements now offering "the comforts of home" to a nurse child for three shillings a week, or offering to take entire charge of and adopt an infant, for some paltry bonus, not exceeding twenty pounds, which the advertiser no doubt thinks may be obtained from the seducer. That a baby-farm may be carried on for a long time without suspicion in a new house in quite a respectable neighbourhood I can testify from experience in my own district a few years since. Yet what is the unmarried woman who has to earn her own livelihood to do with an infant? It is rarely possible for her to keep the child with her at her work, for, probably, she works on her employer's premises—she is a mill-hand, a shop assistant, a domestic servant. The infant must be left to strangers, unless some near relative takes pity on it. Sometimes a young mother, rather than part with her infant, will leave her ordinary employment and earn a precarious living as charwoman; and if this fail her, all that remains for mother and infant is to beg, or starve, or go to the work-house.

(To be continued.)

FROM GENERATION TO GENERATION: A PRELUDE TO THE STUDY OF HEREDITY.

By R. A. DOUGLAS LITHGOW, LL.D., M.R.C.P. ED., F.S.A.,
F.R.S.L., ETC.

(Continued from page 159).

Diseases of the Locomotive Apparatus.—In this group are included the rheumatic affections of the joints and muscles; also those other disorders generally associated more or less with rheumatism—gout, arthritis deformans, rickets, and mollities ossium.¹

In considering the influence of heredity on this group of diseases, I shall at once refer to that feverish constitutional malady known as acute rheumatism (polyarthritis rheumatica acuta) without staying to discuss how the progress of morbid anatomy, and the comparative perfection of our diagnostic methods, in these latter days, have restricted the domain of ancient "rheumatism"—a term which once denoted far more than it does now. I think I need have no hesitation in stating that a predisposition to acute rheumatism is distinctly and emphatically hereditary, and that it tends to run in families: indeed, some recent observations on the transmission of a predisposition to this affection, by Fuller, Lebert, Picot, and other authorities, prove incontestably that the inheritance of such a predisposition is of very frequent—if not of invariable—occurrence, in those cases which are not acquired. In the case of rheumatism, this inheritance, says MacLagan, seldom declares itself before fifteen, and is generally lost again after fifty. What is transmitted is not the disease, but a tendency to it—a greater or less liability to contract it: that peculiar condition of the tissues of the motor apparatus which renders them a fitting nidus for the propagation of the rheumatic poison. He continues, "That some peculiar condition of the motor system is handed down in rheumatism, we know. That this condition declares itself by a special susceptibility of the tissues of the motor apparatus to the action of the rheumatic poison, we also know—but more than this we cannot say—for in this, as in all other cases of hereditary transmission, we can only indicate, not explain, the fact." Acute rheumatism is one of those diseases, an attack of which so affects the tissues of the motor apparatus as to render them peculiarly susceptible to further and more aggravated attacks; so that, *cæteris paribus*, the more strongly the rheumatic habit is thus developed, the more potent will be the influence of heredity in its transmission. The real nature of the rheumatic poison is still *sub judice*; but whatever revelations science may yet make as to this interesting question, there can be no shadow of doubt that a predisposition to acute rheumatism is recognised by experience; also that this predisposition is indubitably and strikingly hereditary.

It may be regarded as an axiom that the more a disease is constitutional, the greater will be the influence of heredity in its transmission; we can, therefore, easily understand why there should be some doubt as to whether chronic articular rheumatism is hereditary or not, being essentially a local affection. Bearing in mind, however, the fact that the majority of those who suffer from it, have already in earlier life undergone an attack, or attacks of acute rheumatism, and that the former affection is almost exclusively confined to the latter half of life, it certainly seems as if it were a *sequela* of acute rheumatism (which generally attacks pre-

disposed persons), and if, as is admitted, this predisposition is transmissible, there seems no reason to doubt that to some extent, at least, a predisposition to this *sequela* may also be inherited. All constitutional affections, unless neutralised by circumstances, as marriage into a new stock, must be inherited in some form or degree; but it is not necessary that the inheritance transmitted to the child should be exactly alike, or assume the identical form characteristic of his parent. I have already referred to metamorphoses in transmission, which account for such facts as the scrofula of one generation becoming tubercle in a subsequent one, or cancer alternating with tubercle or scrofula: we must not on this account deny the potency and efficacy of heredity, which is the rule, however individual peculiarities may differ, but rather believe that, despite such metamorphoses and dilutions which we may not be able to understand or appreciate, the law of heredity is inexorable, and like all other natural laws its potency can never be lost. In this way we may account for the fact of a constitutional affection like acute rheumatism—or rather a predisposition to it—being inherited, whilst the effects of heredity are less potent as regards one of its local *sequela*, chronic articular rheumatism. That any one, however, who has inherited a predisposition to acute rheumatism, subsequently suffers from it, and later on in life develops chronic articular rheumatism, can in turn transmit a predisposition to the one, without, at the same time, transmitting some susceptibility to the other—however diluted or whatever form it may assume, I, for one, cannot admit. The one thing we have to remember is that heredity is the rule; that, however, it may be altered by circumstances in form or degree, its efficacy still exists, and this, notwithstanding the fact that we may not be able to recognise it. I therefore contend that chronic articular rheumatism being most frequently a *sequela* of acute rheumatism, and a predisposition to the latter being transmissible—that although the latter is constitutional and the former local, they stand towards each other as cause and effect, and consequently a predisposition to the one must include to some extent a predisposition to the other. In the same category may be included myalgia, lumbago, etc., which, whether dependent on inflammatory changes in the muscular or the interstitial connective tissue, or neuropathic conditions, are decidedly hereditary, as is proved by every-day experience. I have myself known families, members of which have suffered from attacks of lumbago in one generation after another, and we have all seen the same thing occur as to rheumatic cephalalgia, intercostal rheumatism *et hoc genus omne*.

In approaching the consideration of the heredity of gout, I am fortunately assailed by neither doubt nor difficulty, as in the vast majority of all cases of gout, it occurs in consequence of an inherited predisposition, and this is admitted by all authorities. Out of 523 gouty patients, Scudamore found that 309 had come from a gouty stock; Gairdner, 140 out of 156; Garrod 75 per cent.; and Braun, out of his sixty-five patients, did not find one whose parents or grandparents had not suffered from the disease. Dr. Garrod, in his classical work on "Gout and Rheumatic Gout," instances the following cases:—"A few years since, I was consulted by a gentleman labouring under a severe form of gout, with chalk-stones, and, although not more than fifty years old, he had suffered from the disease for a long period. On inquiry, I ascertained that for upwards of four centuries the eldest son of the family had invariably been afflicted with gout when

¹ Ziemssen, vol. xvi.

he came into possession of the family estate." He also relates the following case, which illustrates the terrible influence of heredity in connection with the disease now under discussion: "A gentleman, forty-eight years of age, whose health has been good with the exception of attacks of gout, which commenced at the age of thirty-six in one great toe. The attacks gradually became more frequent, and more prolonged, so that he was scarcely ever free from them." Dr. Garrod thus sums up the hereditary influence in this case: "The father had very severe gout, the mother, when seventy years of age, began to suffer from it; he has had six brothers, of whom one died of very severe gout, and was crippled from chalk deposits in both upper and lower extremities; another had severe gout and chalk-stones, and died of albuminuria; a third had gout and paralysis, of which he died; a fourth had gout, and died of erysipelas; a fifth died of gout, complicated with some urinary affection; and a sixth is alive, but suffers from gout in the same way as the patient himself." Gout occurs much more frequently in men than in women, who seldom suffer from it until after the menopause; the predisposition is, therefore, more frequently inherited from the father's side than from that of the mother; moreover the tendency may often be traced to the grandparents, while the parents themselves remain free, especially if they have been careful to avoid the exciting causes of the gouty attacks. Heredity also influences the time of life at which the gouty paroxysms supervene: thus, in those persons who have an inherited predisposition, the attacks come on at an earlier period than those who have an acquired tendency; in the latter gout usually makes its first appearance between thirty and forty, but in those hereditarily predisposed it may manifest itself at a much earlier period. Gout is not only a very serious malady in itself, but may become the parent of grave constitutional and functional disorders and diseases. Of these the following may be here enumerated—viz., of the digestive organs: gastritis, neurotic disturbance, dysphagia, intestinal colic, diarrhoea, and hepatic derangement; of the nervous system: headache, vertigo, mental disturbance, delirium, mania, epilepsy, neuralgia, cramp, local paralysis, meningitis; of the heart: slow, rapid, weak, irregular, or intermittent action, syncope, collapse, and various painful and disagreeable sensations; of the lungs: asthma, bronchial catarrh, and pulmonary congestion; of the urinary organs: chronic cystitis, urethritis, gravel, and calculi. In addition to the foregoing, there is also the terrible hæmophilia, now regarded as a result of gout; apoplexy due to rotten blood-vessels; and the cirrhotic, fibrotic, or gouty form of Bright's disease. In this extensive category might also be added eczema and various other forms of skin disease.

We thus see how compound and complex is the inheritance of gout in all its terrible totality! A typical case of gout, whether inherited or not, is easily recognised, and that it is generally hereditary is freely admitted; but when we see, as experience leads us to expect, severe digestive, nervous, cardiac, pulmonary, and genito-urinary symptoms developed in gouty subjects, we should regard them as revealing symptoms, and remember always that these, too, may be perpetuated hereditarily, either in similar or dissimilar forms, in accordance with the law of variability—one series of the phenomena of which is represented by the so-called metamorphoses in transmission. Taken either singly or together, all these symptoms reveal the gouty dia-

thesis which is strikingly hereditary, so that in their production heredity is always not only a potent, but an inevitable factor wherever they exist or may co-exist. No one who has ever suffered from gout is incapable, *ceteris paribus*, of transmitting a tendency to some of its protean forms to his children, and although in each case it may manifest itself differently, yet it should never be forgotten that heredity and variability are the two sources of the tissue proclivities which attest the inherited taint of gout in every case. Heredity, in fact, necessitates the transmission; variability is accountable for the degree and variety of the inheritance.

Rheumatic gout, or rheumatoid arthritis, may be said to bear the same relation to gout as chronic articular rheumatism does to acute rheumatism or rheumatic fever; although it may occur in persons who have never suffered from either gout or rheumatism, whilst generally presenting evidences of both, especially in its external characteristics. The pathology of rheumatoid arthritis is still a *questio vexata*. Dr. Fuller's views are as follows: "The disease should not be regarded as of a hybrid character, or, in other words, made up in part of rheumatism, in part of gout. It is my firm conviction that, just as true rheumatism and true gout do both manifest themselves at different periods of life in the same individual, so rheumatic gout may arise in a person who either has been, or may hereafter become, subject to true rheumatism, or true gout, and that it has no connection with either of these diseases, beyond that which attaches to it in virtue of its being a constitutional disorder, producing local manifestations in the joint." As Sir Alfred Garrod, however, naïvely remarks: "It is a much easier task to prove what rheumatoid arthritis is not than to give the slightest clue to what it is." Irrespective of its pathology, I am more concerned with the hereditariness of a predisposition to it; and although it must be admitted that the influence of heredity is less potent than in that of gout or rheumatism, yet I maintain that like all other constitutional conditions, however they may be modified in transmission, a predisposition to rheumatoid arthritis is transmissible, and this in the face of much opposition. Thus Garrod says: "Hereditary tendency does not appear to exert any very special influence; for in looking over the histories of numerous cases, I fail to find much evidence of its action; if it exists at all, it is much less powerful than in gout. We often find one member of a large family suffering severely from this disease, and the others entirely free from it." Now the great authority from whom I have just quoted does not deny that it is hereditary to some extent, but admits that the hereditary tendency is less powerful than in gout. I also admit this; but until the question is settled as to why some morbid affections should be so much more strikingly hereditary than others, we must be content with the fact that such is the case, and rely entirely upon the light afforded by an ever-increasing experience. That experience warrants our belief in the hereditariness of rheumatoid arthritis is evidenced by the testimony of Professor Charcot, who, in forty-one cases, found a hereditary predisposition well marked in eleven. Moreover, Garrod strives to strengthen his negative testimony as to the hereditariness of this disease by instancing the fact of one member of a large family suffering severely from it, while the others remained free! May I venture to ask if all the children of phthisical, scrofulous, or even gouty parents, have this predisposition transmitted to them in the identical forms, and in similar degrees, as those existing in the

parents? Surely not; else, indeed, should we be able to witness the realisation of the ideal law of heredity! The fact is that variability or atavism, however mysteriously, predetermines which children shall be affected, and in what degree, or whether, whilst they themselves may entirely escape, they may have the inherited predisposition enshrined within them, inoperative, ineffective, and inactive, so that they, in turn, may transmit it to their children, and their children's children. May I also ask, how came one member of the family, alluded to by Garrod, to be suffering from the disease? Did he inherit or acquire it? If the former, he will undoubtedly pass on a predisposition to it, more or less; if the latter, he may also transmit it, even in an aggravated form. Heredity works in larger cycles than we are apt to give it credit for; for beyond the parents and their children are their ancestors and their descendants for many generations, and even as the past slumbers in each one of us, so do the sanitary welfare and happiness of our children's children in the future, for heredity governs all, and its force is never lost.

When alluding to the rachitic diathesis, in an earlier portion of these papers, I said that authorities were divided as to whether it was hereditary or not, also that the majority seemed to think that it was not. At the same time I admitted my belief that the general condition of the health of the mother had much to do with a predisposition to rickets in her children, provided her health was low and poor. To this opinion I still adhere, although time and circumstances impel me now to favour the views of those who regard rickets as hereditary, whatever may be said as to the hereditariness of the diathesis. At least in numerous cases of rickets, hereditary influence has been a factor of great importance, especially manifesting itself in a predisposition inherited more frequently from the mother than from the father; moreover, it has frequently been observed that when several families have resided under the same roof, and under similar circumstances, none of the children became rickety except those whose fathers or mothers had suffered from rickets during their childhood. Besides, as a further evidence of an inherited predisposition, numerous cases of foetal or congenital rickets have been observed under circumstances which negated the possibility of any syphilitic or placental influence. As shewing metamorphoses in transmission, I may mention the fact that other constitutional diseases in the parents may contribute to the production of rickets in their offspring; thus Ritter von Rittershain alleges chronic tuberculosis in the father as a predisposing cause of some importance. Among the parents of seventy-six rickety children whose family history he investigated, he found seven tuberculous fathers and four tuberculous mothers. In the same way many facts are forthcoming to support the opinion that constitutional syphilis in the parents also predisposes to rickets in the children,¹ and thus heredity acts mysteriously and potently with variability, acts and interacts, preserving and perpetuating the commonhealth of the community, as it preserves and perpetuates the characteristics of the race by varying and differentiating the individual.

Of the remaining diseases of the locomotive apparatus, I have still to refer to that very rare disease, osteo-malakia or mollities ossium, which has also been termed "rickets of the adult." Alluding to this, Mr. Hutchinson says—"Respecting a certain number of the best marked cases, there appears good reason to believe that the disease is really a form of

rickets, and that the differences observed between the two maladies are chiefly due to the very different condition of the osseous system as regards its development at the time of attack." Facts are forthcoming which support this view; thus Trousseau records a case in which osteo-malakia attacked a woman of seventy, who had been rickety in childhood. Mr. Hutchinson also mentions a case (the skeleton of which is in the Brighton museum) where the man had lost two feet of his stature from innumerable fractures, faulty union, and the bending of his bones. The children of this man were much deformed by infantile rickets. As to the identity of osteo-malakia with rickets occurring at a later period of life, and the heredity of both, with regard to the former it should be remembered that the rachitic diathesis is dependent upon defective diet and absence of warmth and sunlight; that, as a general rule, it is only temporary, existing no longer as soon as the defective surroundings and diet are supplanted and neutralised by warm, dry, pure air, sunshine, and judicious dietetic treatment. Yet it is probable that in the few rare cases of mollities ossium which occur, it may have been reproduced, or developed *de novo*, under circumstances similar to those on which its primary production depended. Be this as it may, there is much in common in rickets and mollities ossium for which the rachitic diathesis satisfactorily accounts; and when we remember that both spring from and are perpetuated by constitutional conditions involving defective nutrition, we need have no hesitation, especially in the light of the affirmative evidence recorded, in regarding both affections as transmissible by heredity.

(To be continued.)

Special Articles.

HEALTH RESORTS OF THE WORLD.

XIX—ILFRACOMBE.

BY DR. ALFRED J. H. CRESPI, OF WIMBORNE.

THE misguided mortal who allows himself to be over-persuaded to write descriptive papers on "Health Resorts" seldom finds his task pleasant. If he ventures to criticise, however kindly and fairly, he is sure to offend the residents, while if he praises warmly, and perhaps even permits himself to go rather beyond what his better judgment warrants, he only succeeds in overlooking some local lion to which residents attach undue importance, and so, instead of gratitude, he receives censure. A well-known medical writer puts this capitally in a racy letter he wrote me not long ago, from which I take the following lively passage; may my description of Ilfracombe not subject me to the unkind criticisms of the citizens of that flourishing little health resort:—

"I once assisted an old hospital chum, who had settled in practice in a flat (flatter, I never saw) district of East Anglia. In his occasional letters previous to my visit, he regularly urged me not to be carried away by the popular idea that the locality was flat. Arrived at the nearest railway station, I found no vehicle could be had, and the day being fine I walked some four or five miles. At one part of my walk I enquired my whereabouts, and was told that I was on *Turner's-hill*. Up to that moment I was absolutely unconscious of any rise in the road. However, I did imagine a slight drop, say of eighteen inches per mile—for the next three miles to where my friend lived. In the evening, he (having been out visiting when I arrived) mounted his hobby horse, and

¹ Senator.

remarked that though the site of his house was rather low, he would drive me on the following day to some more elevated positions. It was hard to control my risible emotions when he suddenly pulled up his horse on Turner's-hill, and bade me feast my eyes from that elevated spot upon the surrounding country. Never till then did I thoroughly comprehend the term 'relative' as applied to different men's ways of estimating things."

On the north-west corner of the county, picturesquely situated on a bold headland, a dozen miles north of Barnstaple, and forty north-west of Taunton, stands the quaintest and most charming of the many beautiful watering places of Devon. Ilfracombe, what music is in the name! is every day getting better known and more appreciated. Its isolation—in part from the remoteness of that portion of the county, in part from defective railway service—is being got over, and before long will be a thing of the past. From Bristol in summer, and from Swansea, at any rate at that pleasant season, Ilfracombe is easy enough of access. But Bristol and Swansea are a long way from Manchester and London, and though steam has practically annihilated time and space, at least so people say, we slow moving Britons don't like the thought of a journey of 200 miles or more. Once, however, that the lovely valleys and pretty hills of Devon are traversed, the visitor has no cause to complain.

Two railway routes have been opened to Ilfracombe—the London and South Western, *viâ* Exeter, and the Great Western, *viâ* Taunton; both are charming, particularly on a summer evening, and whichever way he goes there will be more than enough to interest the visitor.

The town is quaint and rapidly improving, and has many noble villas in the suburbs, and numerous excellent shops. The railway station is curiously perched on the top of a lofty artificial embankment, high above the town and some little way from it, and every year new houses spring up of all sizes, and there are other unmistakable signs that the town is fast encroaching on the country. Ilfracombe, though with undoubted a most brilliant future before it, is still small, its population hardly exceeding 7,000. More exactly, the estimated population to the end of last year was 6,650. The number of births registered was 169; this is equal to a birth-rate of 25.4; and the deaths were 98, equal to a death-rate of 14.7. The deaths of ten visitors were included among the latter, so that the death-rate among the stationary population of 6,650—or in other words, the true death-rate for the last twelve months—was 13.2. In the season the influx of tourists amounts, it is said on good authority, to the enormous total of 200,000. One of the most notable features of the place is its rocks—bold, precipitous headlands, from which extensive views over sea and land are got. In the far distance, on the western horizon, a faint ridge is visible, that is, the interesting little Island of Lundy, still remaining one of the wildest and most romantic spots of the far west; while to the north is seen, in clear weather, the land of the ancient Cymry, that strange and excitable race, so touchingly attached to their beautiful mother tongue, a people once almost exclusively dwellers in the open country, on the bleak hill side, and in lonely moorland farms, but now changing their habits and pouring into the towns, where they nevertheless retain many characteristic features of their ancestors, such as their hearty religious worship, their fierce enthusiasm, and their musical mother tongue.

The singular mildness of the winter climate, and the coolness of the summer days, are bringing Ilfracombe into

marked prominence as a Health Resort. Kingsley wrote:—"If you are sea-sick, or heart-sick, or pocket-sick either, there is no pleasanter or cheaper place of cure (to indulge in a puff of a species now well nigh obsolete—the puff honest and true) than this same Ilfracombe, with its quiet nature, and its quiet luxury, its rock fairy land and its sea walks, its downs and combes, its kind people—and if possible—its still kinder climate, which combines the soft warmth of South Devon, and the bracing freshness of the Welsh mountains." Invalids, particularly those suffering from lung affections, are finding out that they are especially comfortable at Ilfracombe during the winter, and on days, when in the midland and northern districts, they would be confined to the house, at 'Combe they can safely and agreeably pass hours in the open air. On those dull, grey days, of which they get so many in northern towns (days of gloom, calm, and depression), at Ilfracombe the warmth of the sun disperses the cloud canopy, or, more accurately, does not permit it to form, and the bright sunshine, blue sky, and soft atmosphere remind one forcibly of an April morning elsewhere.

In the summer excursions often cross from Ilfracombe to Lundy and Clovelly: sometimes, too, a swift moving steamer ploughs the stormy waves and goes right round the bold rocks of Lundy—rather a long sea journey for one day: amply repaid, however, by the noble spectacle of the huge walls of rock on the west and north sides of the Island.

Among the most majestic sights of the south-west coast of England is the tremendous sea that after storms bursts upon the rocks. Strange, too! sometimes when the sea is raging and heaving like an unruly monster, and the largest ships toss like walnut shells, the sky and air are clear and brilliant, and visitors have the delight of basking in warmth and sunshine, and at the same time of looking down upon a turbulent ocean, magnificent in its fury, and irresistible in its power. Let no one leave Ilfracombe without seeing the Morte Stone, the Death Rock of the Normans, or let him ever after hold his peace as to his knowledge of the wonders of 'Combe and its romantic surroundings.

The Rev. G. Tugwell writes:—"People in general like Ilfracombe because it is different from most other summer seaside haunts: because it has no esplanade or reach of sand, where every-body must of necessity walk up and down if he walks anywhere: because there is a wide seaside walk at some distance from the lodging-houses, for those who like to enjoy sea air and sunshine without fatigue: because there are innumerable walks in all directions for those who like walks, and do not care to meet "everybody" in such proceeding: because one needn't always wear fine clothes, but may ramble about over damp rocks or dry cliffs unobserved but not unobservant: because from the very configuration of the ground it is one of those rare places, which man cannot utterly mar, however much he may try and has tried so to do—the houses must be built in detached groups, and in irregular lines, roads and paths must serpentine and rise and fall, and even the most rectangularly minded of architects and land surveyors cannot ruin the picturesque by straightness and regularity: because the climate is not one of extremes, for it is never too hot in summer, and rarely too cold in winter. The grass is green and sheltered; trees and shrubs grow, and flowers bloom even at Christmas time, as they do not in colder districts: because the ground is dry and the air moist, and one's body and mind are, therefore, invigorated and braced without being chilled and withered, as they are in less genial latitudes: because in fine, there is

more freedom and more health to be enjoyed here than in most other resorts of the kind."

Lodgings abound, and are cheap and of excellent quality. There is, moreover, an entire absence of that town air and noisy confusion that make some watering-places only second editions of London. Except for occasional sea excursions, Ilfracombe is not a particularly good centre for seeing many places of interest, although it has some of great beauty near, among others Lynton and Lynmouth, both so charming. Where, indeed, would you find, even in England, even in pretty Devon, anything sweeter and more characteristically English than the valley near Lynmouth on to Watersmeet? Excursion breaks and coaches run daily in "the season" between Ilfracombe and Lynton: a coach also plies between Ilfracombe and Barnstaple, and, though I only speak from hearsay as to the beauty of the latter, the drive has great charms. The excursion to Lynton is deeply interesting, and near Parracombe there are to be found wild wastes, strongly reminding one of Dartmoor and Exmoor, not merely magnificent, in their utter solitude and desolation, but withal interesting and most refreshing after the worry of town life. The wild uninhabited Forest of Exmoor is not far off, and it is a singular sensation to an Englishman to walk eleven miles along a highroad, not passing a single house. Yes, Ilfracombe is very beautiful, and highly favoured by nature and art, although, and most fortunately, it lacks the vast crowds of Brighton, and the noisy confusion of Ramsgate and Margate.

The subjoined extract from the *Christian World* is worth reproducing:—"Ilfracombe in spring is beautiful, with its lofty rocks looking warm in the golden sunshine, and its blue waters—ever alive with steamers and sailing ships—bounded on the west by Lundy Island. It is difficult to describe the picturesqueness of Ilfracombe. I should say if you took a bit of Malvern, and half-a-dozen Plymouth Hoes, and threw in a little touch of the inner harbour of Douglas in the Isle of Man, dotted over the green hill-sides and valleys no end of modern sea-side residences, and added a mile, in the shape of a High-street with old-fashioned shops, now and then intermixed with others of a later and more ambitious character, you could frame for yourself a pretty fair idea of the Ilfracombe of to-day, a place very much improved since Jane Taylor used to come here all the way from Ongar for the benefit of her health. As a winter residence Ilfracombe possesses many advantages. *Vanity Fair* the other day offered a prize as to the most beautiful county in England, and the loveliest watering place; and Devonians will be glad to hear that their county was considered the most beautiful in England, and that Ilfracombe stood highest on the list of towns, having obtained thirty more votes than Scarborough. Bournemouth secured the third place, Torquay the fourth, and the remainder were placed as follows:—Clovelly, Lynton, Lynmouth, and Hastings."

In a few days the lanes and hedgerows of Devonshire, already putting forth the promise of the summer, will be one mass of hawthorn blossom; the banks in many districts will be literally carpeted with splendid violets and primroses, and the tall and graceful elms will be donning their bright green summer dress. Then, in my opinion, is the time of all the year to visit Devon, and enjoy its glories. After all, the latter part of April, May and June are far more beautiful than August and September. The days are longer and brighter, the skies less cloudy, the foliage fresher and greener,

the songs of the merry birds far more continuous and inspiring, and the flowers much more plentiful. It is a mistake to put off the summer trip to the country until autumn is at hand or actually come. Early summer is the time to visit the country, and of all parts of England, none surpasses, perhaps none approaches, the villages and woods of Devon on a cloudless May day, and no watering places have greater attractions than those of the northern and southern coasts of that extensive county. I have seen Exmouth bathed in sunshine and clothed in rich verdure on an April day, and Exeter looking like a garden of Eden on the 28th of that capricious month.

The season at Ilfracombe is at its height in August and September, but on medical grounds there should also be a winter season, when invalids, rather than pleasure seekers and holiday folk, should go there in large numbers. Compare the weather in January at Ilfracombe with that at Walsall or Sheffield, recall the bright sunshine and soft balmy air that often make December and January pleasant enough on the Devon coast, and then ask whether the inland manufacturing towns have anything similar to offer. Assuredly not. When the improvements now in progress—the Winter Gardens, new piers, and Palace of Health—have been carried to a successful issue, they will add largely to its beauties and conveniences. 'Combe will then have nothing to fear from the superior attractions of any other health resort. The following meteorological tables will be useful, and figures are the best of all arguments, and the most convincing of all proofs:—

ILFRACOMBE SHADE TEMPERATURES, 1886.

1886.	Mean Temperature.	MEANS.			EXTREMES.	
		Maximum	Minimum.	Range.	Maximum	Minimum.
January	40.7	44.5	36.8	7.7	51.2	30.3
February	39.0	42.0	36.0	6.0	49.4	30.4
March	42.6	47.0	38.3	8.7	62.0	28.3
April	47.5	53.7	42.0	10.8	68.5	35.5
May	53.3	58.3	47.8	10.5	68.0	38.8
June	57.2	60.8	53.1	7.7	69.3	48.1
July	61.7	65.8	57.1	8.4	73.2	51.3
August	62.0	65.1	57.8	7.3	70.2	52.8
September	59.7	64.1	55.2	8.9	70.0	50.3
October	55.0	59.1	50.7	8.4	71.2	44.5
November	49.1	52.0	45.4	6.6	56.9	40.3
December	42.7	47.1	38.9	8.2	54.0	31.0

RAINFALL, 1886.

	Relative Humidity.	Inches of Rain.	Number of Rainy days.
January	86	3.94	19
February	85	0.47	7
March	82	3.24	15
April	87	1.79	17
May	84	2.86	19
June	83	0.90	9
July	83	3.03	17
August	84	1.18	9
September	83	2.40	13
October	86	5.60	21
November	87	3.69	25
December	86	4.69	25

XX.—NOTES ON MADEIRA AND THE CANARY ISLES.

By ROBERT R. RENTOUL, M.D.

WE left Liverpool in the latter end of November by the British and African Steamship Co.'s *Opobo*. As we steamed off from the landing stage, on the tender, a keen bitter wind—rendered more biting by the frequent showers of rain and sleet—made us long for the far away and pleasant

sunshine of the Canary Isles. Outside the bar—the wind being strong and the waves high—Captain Clancy thought it well to put into Mulfra Bay. Here we remained at anchor all night, the holding ground being good, and the shelter perfect. Beyond, the waves were big and white, while inside, we, with about thirty other ships, lay in calm water. Invalids who wish to escape from this cold wind should start some time in September or October. Next day we proceeded on our voyage, and when near Holyhead our pilot left us. The usual ship routine, as far as we passengers are immediately concerned, goes on from day to day—sleeping, eating, a little reading, with perhaps a game of cards or quoits, a few songs at the piano, or a sweepstake of a shilling contribution from each, on the distance run (the half going to the Sailors' Home), make up our daily life. Coffee and biscuits are on the table at 6.30 a.m., breakfast at 8.30, lunch at 1, afternoon tea at 4, and dinner at 6.30. The food, as far as material goes, is very good, but more attention might be given to the cooking. There were too few stewards—one to each table at which twelve persons sat not being enough. The stewardess, by looking after those sick in bed, helped to lessen the difficulty. One must remember, however, that this line give a round-trip ticket, lasting twelve months, for £15. Some of the vessels have a smoke room, and their saloon amid-ships.

Our voyage through the Bay of Biscay—or to be more accurate, our voyage along the edge of the bay, for we scarcely enter it—was pleasant. I have crossed the bay on twelve occasions, and never yet had rough weather. No doubt, however, of its being rough sometimes! Each twenty-four hours brings us into warmer latitudes, the thermometer gradually rising. On the morning of the seventh day we arrived at Madeira, and anchored off Funchal. Before reaching this island, we passed the Desertes—three barren rocks, which are not inhabited, except occasionally by fishermen and turtle seekers. The Loo Rock and the lighthouse, near Funchal, as well as the coast line, look attractive. The Health and Customs authorities having passed our ship, many boats pull off from the shore with fruit, Madeira chairs, and other wares. Native boys cast off their scanty clothing, and invite the passengers to throw "one shilling" or "one sixpence" into the water, for which sum, or less, they will give an exhibition of their swimming and diving powers, some even offering to go under the ship and come up at the other side. This is a variety of entertainment seen in many warm latitudes, as Suez and Sinagapore. We then made a start for the shore. To land here is sometimes a difficult matter, especially when the wind blows in on the shore. However, the boatmen—who engaged to take us for one shilling each—knew their work, and so we trusted to them. As we neared the shore the boat was pulled round, with her head to sea. We next drifted slowly in; and then, waiting for a fair-sized wave, we rushed in and grounded on the beach. This is the signal for two of the boatmen to jump out into the water, where they steady the boat. Another wave is waited for, and with a helping hand from those on shore, the boat is pulled up high and dry. One word of advice may be necessary for the nervous. Sit quietly, and sit low in the boat, and do not rise from your seat until told to. It is a pity the Portuguese Government does not see its way to build a mote or a break-water here. Having landed, we may either walk, ride, or drive to the hotel. We preferred going in a bullock cart. This vehicle is somewhat like a sledge; it is covered in by

a top and side awning. Two quiet oxen pull it along over the large flat stones with which the street is paved. One man goes in front and guides the bullocks, while the other, with an oiled rag, runs along, now and then placing the latter under the runners, so that it may glide more gently over the stones. We stopped at one of Mr. Reid's hotels—the "Santa Clara"—and ordered lunch and dinner, as the captain had told us we need not come off until eight o'clock. This hotel is well situated, and has a good garden, verandah, tennis court, and billiard room. The charges vary from 8s. to 10s. per day for one person, but other arrangements can be made by those who propose remaining for some months. We paid 3s. each for lunch, and a little over 4s. for dinner.

After lunch, we engaged hammocks, and went up to the church on the mountain, this building being placed at an altitude of 1,800 feet. These hammocks, borne by two men, are very comfortable. Each bearer carries a stout, short pole in one hand, having a fork-like termination at one end. This he uses at one time as a help in climbing, while at another he places it over the shoulder unoccupied by the hammock-pole, passes it under the latter, and with his back as a fulcrum, transfers the weight from one shoulder to another. Now and then the men rest; when one end of the hammock-pole is placed in some convenient hole in a wall, while the other rests in the fork of the staff. The bearers perspire profusely. They have strong tendencies to stop at all the wayside inns, here asking us for money to buy some wine. I have been told that it is a mistake to give them anything until the journey is completed, and also that they do not at all appreciate one's getting out to walk, so as to rest them. We climbed up the steps of the church. Here there is a beautiful view of Funchal, the bay, and the neighbouring mountains. Having seen the church and bought some crochet work, we arranged to come back. It is the custom to come down from the church to Funchal in the carro, or running sledge; but one of our number was timid, so we took the hammocks back, and returned by another way. The carro-ride is spoken of as being most enjoyable. The carro consists of a kind of cane basket, fixed on runners; it whirls one rapidly along, and is not at all dangerous, though the streets are narrow and the turnings somewhat sharp. Two men stand behind, and with a rope guide it along. If they wish to slow down, one foot is placed on the runner, and the other on the ground.

Having arrived in the town, we took a walk through the streets, buying some articles of local interest. We visited the fruit market, and bought fresh figs, oranges, guavas, mangoes, and custard apples. The last-mentioned fruit is very luscious; it is cut into two parts, and the contents eaten with the aid of a spoon. We also called at the hospital. The resident surgeon kindly showed us through the wards. One patient was suffering from typhoid, and several from consumption. On the outer wall of this building is an aperture, guarded by a small door. Inside this is the place where mothers who wish to forsake their infants, leave them. On doing so, a bell is rung, when a sister comes and takes the baby. Afterwards, it is given to a wet nurse, and if not hereafter claimed, it belongs to the Government, who educates it. I was told that this system of disposal of infants does not in itself lead to any increase in the number of illegitimate children, and that on an average about thirty are put in each year. A similar system is in force in the other islands, in Spain, and other European States. One would not like to see such a form of vice legislated for in

this fashion, and introduced into England, although it might seemingly lessen the infantile mortality. But it is to be remembered that the death-rate of all foundling hospitals is excessive. The hospitals in these islands are supported by State taxation, and not by a system of charitable benevolence, as at home. They resemble more in appearance our best workhouse hospitals.

Having dined we went on board, regretting we had not a few days to spend here. Those who go ashore with luggage have to pass through the customs, as they examine and tax almost everything. Even a tax of 13s. 6d. is put on anyone who remains on the island over one week. Funchal is a beautiful and picturesque spot. There are many mountains to climb, and the trips to the Gran Corral, and the Twenty-five Fountains, as well as other places of interest, make the time pass pleasantly. There is an English doctor of medicine resident here; the hotels are good, while steamers and telegraph connect it with Europe. Many English reside here. The natives give one the idea that they are underfed, while their taxes press heavily upon them. The place seems to be very destitute of good level roads for walking and driving purposes, and invalids must soon tire of hammock, carro, and sledge. The horses are said to be sure-footed. The constant climbing must be a great effort to delicate persons, while the various temperatures experienced while ascending and descending may be productive of chills. It is well, therefore, when climbing to take rugs. Funchal has a heavier rain-fall than the other islands; this, and its dampness, being the chief objections. The net humidity of Madeira is said to be 76°, while that of Orotara is 64.9. I am told that it is much pleasanter and healthier living in a private house, than down in Funchal, with its narrow streets, where there is less pure air and sunlight. From October to May is considered to be the best months to spend here. *The Castle Line* of steamers (D. Currie and Co.) despatch steamers every alternate Wednesday from London, and from Dartmouth on the following Friday. These call at Funchal and Grand Canary alternately. First class fare out is about £14, and the homeward fare £12 12s. *The Union Line* from Southampton and Plymouth fortnightly, call at Funchal on both the outward and homeward voyages. The fares, first class, to and from Madeira are £15 and £12, respectively. Some families, it should be mentioned, engage a villa or kinta, situated at various heights on the hill. The rent of these vary from £50 to £200 for the year. But the local agents of any of the Steam Ship Companies would be willingly to give any information beforehand. Messrs. Forwood Bros. & Co.'s steamers leave London monthly. The fare to Grand Canary is £10 single, and £15 return. The fare for the round trip is £20. These steamers call at Madeira, Las Palmas, Santa Cruz, Orotara, Palma, and occasionally at Lauzarote, touching at Lisbon often on the voyage home.

From Funchal to Santa Cruz—the chief town of Teneriffe—is about 260 miles. On approaching this island we looked for the famous Peak, but as the clouds enveloped it, we could not get a glimpse of its snow-clad summit. Having remained a few hours at anchor in the bay of Santa Cruz, and taken on some more passengers, we started for Las Palmas—the capital of Gran Canaria. From port to port is about sixty miles, and we enjoyed our good luck in making the trip during day-time, consequently we had good views of the coast, the Isleta with its lighthouse and signal station, and the town and port. Passed by the port

authorities, Mr. Quiney, who owns the English hotel here, came on board and kindly offered to look after our luggage, and to take us on shore. As the hotels are generally full, it is better to engage the rooms by letter, or to telegraph from Santa Cruz, or Madeira. Hotel managers out here complain that many engage apartments and never come out. This may be so; but it is no excuse to offer to another person when he comes out, but finds his rooms occupied by some one else. The shore-boats are large, stoutly built and fairly dry. Our boatmen seemed to be afraid, as it was blowing a fairly stiff breeze. They say, "Mucho tornado;" but I think this was for our benefit! Having landed, we got into a coach, drawn by three horses, and off we galloped along a level road, for about three miles, to Las Palmas. The boat and carriage hire were charged in our hotel bills, so the visitors need not trouble himself with the boat men. No doubt, they will come up and ask for extras, but if people will give away money unnecessarily, they must take the consequences, and make the place disagreeable for subsequent tourists. The boat hire, coach, and conveyance of luggage, cost about four shillings for each of us. It is a pity the different Steamship Cos. do not agree to provide a steam tender; but here, as yet, no thought seems to be taken for the weak invalid. If he can rough it along with others, well and good; if he cannot, he must abide the results.

Quiney's hotel is situated in the town. The hotel is comfortable; the drawing room and dining room are of a fair size, but the latter is too near the kitchen—with the result that the smell of cooking is disagreeably prominent. The bedrooms are large; the beds extremely clean and comfortable, while the mosquito net protects one from the bites of these troublesome little animals. There is a billiard-room, a garden, and verandah. A tennis court is wanted, while a shooting gallery, and a croquet court are much longed for. Croquet should be the pleasantest game for invalids, as the lightning speed of the present tennis player seems almost to well-nigh ruin this deservedly popular game. The hotel charges vary from eight to ten shillings per day; but different rates are given to those who remain for some time. We slept at the Dependence, the best bedrooms here being pleasant and quiet. All have their meals at the hotel, which is about two minutes' walk from the Dependence. Hotel life here is quiet and calm. Our Spanish waiter, Juan—pronounced wan—brings in a cup of coffee and banana at about 7.30 a.m.; then a bath and dress; breakfast at 8.30; lunch at 1; afternoon tea at 4; and dinner at 6.30, coffee being served in the dining room after. The food is very good, but the mutton is usually tough. Excellent milk may be had for two or three pence per quart—a point the invalid will appreciate. Good porridge, fish, eggs, chop, steak, omelet, tea or coffee, and fruit are supplied for breakfast. The lunch is substantial, and the same may be said of the dinner. Native wine is also supplied free at dinner, but my advice would be, not to drink it. It is said to contain a fair quantity of potato spirit. There is rather a dearth of waiters, with the result that the intervals between the courses are too long.

The sanitary arrangements are fair, and the water supply good. One notices the absence of a weighing machine and such other trifles, appreciated by the invalid. An unpleasant feature—more especially for ladies and children—is that the bar of this hotel is close to the verandah and garden. Occasionally people come from the port and here imbibe

too freely. The presence of two large barrels of beer, with taps attached, and tumblers ready, do not add respectability or beauty to the place. Indeed, it would be an easy matter out here to ruin an hotel by sending a number of roughs—English or others—to drink, and make themselves unpleasant to the residents. One never sees a Spaniard suffering from any form of alcoholic poisoning. Alas! like a self-righteous race, we too often point to the faults of these Spaniards, while we fail to notice our own. Perhaps, in the near future, all these small, but eminently unpleasant—because so prominent—inconveniences will be removed. Mr. and Mrs. Quiney do all in their power to make their visitors comfortable. Perhaps the invalid, and those who cannot look after their own particular wants, are not so well off, but the scarcity of waiters renders it impossible for all to be looked after. Moreover, this is an hotel, *and not a hospital*. Certainly an invalid would not be taken into a London hotel if he required separate attendance, with his meals served in his bedroom, unless he paid considerably extra, and had a nurse with him. I feel certain that weak invalids, unable “to take things as they come,” should never leave, or be sent from, home, without a companion to look after their wants, and to provide any little extras. Would it not well repay a good nurse to live at Las Palmas, so that she might look after invalids at the hotels? At present there is no such arrangements, and the authorities at the Spanish hospital will not send out their nurses. Could they not be induced to do so?

The other hotels at Las Palmas are Spanish, and their charges are about four shillings per day. The disadvantages of eating Spanish cooked dishes, and being waited on by Spaniards who don't speak English, are sufficient to make one prefer to stay with those of our countrymen who provide for the wants of the traveller here.

The town of Las Palmas has a population of about 16,000, and to the tourist contains many places of interest. The cathedral is a fine building, and with its vestments, altars, and pictures, is well worth a visit. It is a good climb up the spiral stairs to the roof, but the fine view from it of the town and bay will well repay a little expenditure of energy. Up here one notices a bee-hive, the busy toilers enjoying themselves in the bright sunshine on this December day. The cathedral is not yet perfectly finished. Opposite it is the public square, which is provided with seats, while at the other end is the museum, containing so many interesting relics of the people who inhabited these islands, and who were exterminated some 300 years ago by the Spanish conquerors. Are we repeating history in our actions towards the natives of Australia, the Maories in New Zealand, the Red Indian in America, and the black man on the African coast, with our best gin *at two-and-six a case*? This museum, among other things, contains a jar of butter 400 years old, a few Guancho mummies, skulls, and bones; other parts are devoted to natural history specimens. A short walk, passing on our way a fountain at which the women draw off water by the aid of long bamboo rods, and by the Spanish hotel, brings us to the new theatre. This is an imposing building, and is now almost completed. Under the same roof is a concert hall, where, on the evening of our day of landing, we had the pleasure of being present at a really enjoyable concert. A walk along the main street and past the offices of the British and African Steamship Co. brings us to a garden provided with good trees and seats. It is called *el plaza de los Ingleses*. Opposite it is the new

house for the Governor. Beyond the garden a little way is the mole. It is unfinished, and will remain so. At it the coasting schooners land their cargoes. During the morning hours a pleasant walk may be taken here, provided no unpleasant smells are in the air. The fruit and fish markets are clean and also modern in construction. The streets are rather uneven, but the footpaths are smooth. A water-cart has, owing chiefly to the efforts of Dr. M. Douglass, been provided. Many visitors buy shoes made of goat skin; these cost about twelve shillings, being cool and light. One can walk about comfortably with clothes such as are worn during an English summer. A straw hat, a white-covered umbrella, and a pair of tinted glasses to counteract the glare will add to the comfort of travellers. The sanitary arrangements of the town are not very good, one meeting with very unpleasant smells. In fact, the manner by which the sewage is disposed seems to most people to be a mystery. The banana trees secure a full share. This, if allowed to go unchecked, must soon have a bad effect on this place as a health resort. The water supply, however, is very fair, and is brought from the mountains. There is an absence of English filters, but the “drip stones,” made from a porous sandstone, and which act as filters, take their place. I fear many look as if they had been too long in use, and remind one of some of our filters seen at home—these having been so long in service, and never cleansed, in reality, dirty the water which they are intended to filter. Does the invalid, with his little black respirator, never think how, often in long use, he breathes on it, and then asks it to let in pure air?

Visits may also be made to the casino, or club. It contains a reading, billiard, and ball-room, and is situated near the Plaza de Cairasco, where there is a statue to the poet Cairasco standing some little way in front of the main entrance of the old theatre. This theatre is under the same roof as the club. The members, in the cool of the evening sit out in front. During our stay they gave a dance, issuing a general invitation to the visitors at Quiney's and the Spanish hotel. At these dances there are no programmes, and it is not considered the “correct thing” to take a *senorita* out of the ball room to the balcony or stairs between the dances. The barracks, formerly a monastery; the *calegio* de San Agustin; the hospital, gaol, cock fight pits, the leprosy hospital, and the Spanish cemetery should be seen. A visit to the last mentioned place is, I am told, not of a pleasant nature. The bodies are placed either in graves or in holes in the walls. These tombs are let at eight shillings a year, and if this sum be not paid regularly the body is taken out and thrown into a corner of the cemetery. I am told that few Spaniards accompany their deceased relative's funeral. There is now a small English cemetery.

The beggars here are in great force. They are given one day each week, and some of them look miserable objects. Their cry of “*Deme un quarteto*,” soon begins to irritate one. They even come into the main passage of the hotel, and as they are covered with vermin, and suffer from skin and eye diseases, it would be much better if they were excluded. Perhaps the Spanish custom of each house supplying one beggar with food or money is a good one, and stimulates private benevolence; but to visitors the beggars are a great nuisance. Indeed, no one will regret taking a tin of Insect Powder with them, for one may be troubled with unbidden guests. Eye complaints appear to be very prevalent among the children. There are not many “*curios*”

worth buying. Certain old coins, called tostones, are made into bracelets, pins, and necklets. They have been made by dividing a dollar-piece into four; this action being due to the fact that the Spanish Government would not supply the island with a sufficient coinage! Crochet work of all patterns may be bought at the hotel, when Mrs. Quiney will tell one what to pay.

The evenings and nights are usually very fine. The night watchman, or sereno, with his long spear and bull's eye, calling the hours, makes an interesting picture. The streets are lighted with oil-lamps, coal and gas being absent on this island. Report says that the electric light will soon be introduced. Numerous barbers' shops are seen, while many people in the shops play cards, and so pass away the hours. Above the town is the Fort del Rey, and the signal station. In-coming steamers are signalled at the lighthouse, and afterwards at this station. In the verandah of the English hotel is a key to the various signals, so that one may easily make out what ship is coming, where she hails from, and to what company she belongs. There are two good chemists' shops.

(To be continued.)

SCOTTISH HOSPITALS.

By A. W. WALLACE, M.D.

WE have before us the last reports of the five principal Scottish Hospitals, and of that of Sunderland. Of course annual reports cannot be expected to yield much of interest in respect to the medical and surgical treatment going on in the hospitals, but they afford some interesting and instructive matters in reference to income and expenditure. Of all the reports that of Edinburgh is by far the best arranged. It is of octavo size, extends to forty-three pages, and gives all the financial information in a very compact and accessible form. It does not, like the others, give a list of the names of contributors. We commend the arrangement of the accounts to the study of the treasurers of other hospitals. Similarity in grouping of various expenses allows of comparison between institutions, and that adopted in Edinburgh is undoubtedly the best. There are some things in the Edinburgh Royal which need to be looked into. Its outlay per head is several pounds higher than in any of the other hospitals, and it burns twice as much coal in proportion to its number of beds as do the Glasgow hospitals, leading to an additional expenditure of over £1,300 a year. Moreover, it boasts of having 200 out-patients every day, 60,000 attendances a year. We should like very much to know how many of these could not just as well have been treated by a general practitioner, and have paid a small sum for the advice they got. The words of the report are worth quoting: "Not less than 200 patients have, on an average, attended daily, obtaining the benefit of the high professional skill of the physicians and surgeons, etc., etc." Evidently the medical puff ball is not burst yet.

The outlay on stimulants is not a very heavy item in any of the hospitals. One is curious to know why it should be about 30 per cent. more in the Western Infirmary, Glasgow, than in the Royal. In the Sunderland Infirmary it is less than a fourth of the amount it is in the Western. Another subject of great interest is the cost of surgical dressings. Edinburgh spends no less than £1,163 on antiseptic dressings, in addition to £507 on ordinary ones. Of course if this expenditure is essential to the saving of life one would not grudge it, although it were twice as

much, but if a good deal of it is only a fashion—and like some ladies' fashions, rather an expensive one—we should like to see it relegated to some other place. Mr. Lawson Tait uses the dry method, and his beds only cost about fifteen shillings per annum each. We need hardly say that his results bear comparison with any hospital.

The nursing in all these infirmaries is of a high-class character, especially in Edinburgh. There also great attention is paid to the comfort and well-being of the nurses. They have a diet of varied character, with fresh vegetables and soup, and they are not required to do any menial duties, such as sweeping the wards, cleaning brasses and kettles, and the like. We consider it a profound mistake that in some hospitals ward maids are not employed to do the menial work, and it is put upon probationer nurses. It lowers their position in the eyes of the patients, and so lessens their efficiency. The well-being of the nurses is one which ought to enter into the consideration of infirmary managers far more than it does, especially in respect to diet and hours for recreation. For instance the time of recreation for the nurses in the Glasgow Royal is in the afternoon, which in Scotland means after nightfall for some months of the year, and young girls are allowed to traverse the street by gaslight in one of the worst parts of the city.

Again as to the sources of income. We present a table, which seems to us of great ethical interest. In Edinburgh

	Edinburgh.		Glasgow.	
	£	s. d.	£	s. d.
Collections for all objects in the Voluntary Churches	95,656	0 0	168,443	0 0
Income of the Ministers paid out of these Collections	28,944	0 0	64,427	0 0
Amount paid to the Infirmarys	1,907	0 0	820	0 0
Contributions of all Classes and Denominations to the Infirmarys	5,231	0 0	20,170	0 0
*Contributions per 1000 of population:—				
To "Religious Purposes"	405	6 0	240	12 0
The Infirmarys	22	3 0	28	15 0

*This does not include the endowments of the Established Church nor the voluntary contributions of its members to "religious purposes," but the contribution to the infirmarys includes every class of donor.

two voluntary churches raise nearly a hundred thousand per annum for religious objects. Of this amount they give 30 per cent. to maintain their ministers, and 2 per cent. to provide for the sick poor. The whole contributions of Edinburgh to the infirmary, including those from Established Church, and no church amount to only $5\frac{1}{2}$ per cent. of what the two voluntary churches raise for "religious" objects. In Glasgow matters are much the same. Measured by the money spent on stipends, the good people of these cities seem to fare sumptuously in spiritual things, at least every "Sabbath," while Lazarus gets the crumbs. According to our reading of the New Testament faith works by love and is shewn by good works, and of all others the sick poor are those to whom kindness should be shewn. We believe, however, that in not a few cases "Evil is wrought by want of thought, as well as by want of heart," and that if the claims of the sick poor were more fully and persistently brought before well-to-do people, the response would be greater than it is. It is worth noting that Dublin, with a population of about half that of Glasgow, has no fewer than nineteen hospitals, with beds varying in number from 16 to 200, and providing an aggregate accommodation of 1,400 patients, and supplying a bed to about every 400 of the population. The contributions last year amounted to £14,270, of which about £700 came from working men. The "rebellious and bad city" has some Christian charity in it yet.

does not seem to have much antipyretic power when the temperature is normal, as it was in this case. (3) As I was obliged to discontinue its use in another case, the notes of which I have not now by me, owing to the supervention of very troublesome coryza and extreme coldness of surface after one drachm had been taken in divided doses, no amelioration of suffering having taken place. I consider that this new product is uncertain in its action, and should be administered with great caution, ascertaining the temperature, condition of pupils, and state of heart and pulse, before giving a subsequent dose.

Reviews.

1. *The Medical Annual*, 1888. pp. xvi., 620. 2. *The Dictionary of New Treatment: a Reprint from the Medical Annual*. pp. iv., 432. By a COMMITTEE OF EDITORS. Bristol: Wright & Co. London: Hamilton, Adams and Co.

THESE works are part of an annual effort to help busy practitioners to keep abreast of the times by giving them in handy form a conspectus of the newest theory and practice, and a sketch of the most recent discovery, in each succeeding year. Such knowledge has usually to be obtained by wading through the annual mass of medical literature, and making manuscript notes of whatever is worth remembering; and those who know the trouble of doing this, or the disadvantage of leaving it undone, will not allow the *Medical Annual* to pass among the multitude of ordinary publications, but will welcome it as supplying them with information which hitherto could only be got at with infinite labour; and by the more busy of practitioners could scarcely be acquired at all. The editors in their preface invite help from their readers; and that help can be more efficiently rendered by pointing out defects, than by dwelling at great length on the general excellence of the articles of which the work is composed; so it will not be misunderstood if a considerable portion of the space at our disposal be occupied in bringing out the two weak points which revealed themselves during a somewhat extended examination of the volumes before us. By way of testing the utility of the work on the subject of "New Remedies," to which more than a hundred pages of this year's *Annual* are specially devoted, we set down a few names of drugs, selected at hazard, but on which something new might reasonably be expected, and proceeded to seek for whatever the two volumes had to tell us about them. The drugs chosen were antipyrin, cocaine, saccharin and chian turpentine. Taking up the *Annual* with implicit faith in indexes we turned to the general index, but found no mention of antipyrin. We then turned to the other index in the same volume; but neither was it in its alphabetical place there. It was only on a subsequent occasion that we caught sight of the inch of small print which precedes the index where the words "Antipyretics—See Fever," enabled us to hunt out, on page 13, an entirely satisfactory sketch of the present position of antipyrin in medical esteem. On pursuing the same course with the other volume, we found antipyrin duly catalogued in the index, but when wishing to ascertain its utility in sunstroke, we referred, as directed, to page 356, we found no mention of either the disease or the drug. A further search showed that 356 is a misprint. On another page we found all

that we wanted. With regard to cocaine the search was eminently satisfactory. The information was easily found, and sufficiently copious. And it is observable that whereas the earlier volume adopts the spelling *cucaine*, the later changes it to cocaine which is undoubtedly the more accurate, as derived from *erythroxyton coca*. For *saccharin* we searched all four indexes without finding a trace. On looking for *chian turpentine* we found it, and readily, but it was under the head of "cancer," not of "chian"; and the respectful treatment accorded to the drug is calculated to give Dr. Clay entire satisfaction. After this we gave up trusting to indexes; one result of which was that we discovered on page 88 the missing "saccharin"; and, as in all cases, the article *when found* proved interesting and satisfactory. By way of testing the volumes as to Physiology, Medicine and Surgery we selected at random the subjects *Hydroa*, *Alopecia*, *Brain Surgery*, *Blutplattchen*, *Whitehead's Operation*, and *Aneurysm*. Of all save one we found sufficient notice, and of some—notably of *Blutplattchen*, but under the head of "heart" at page 217 of the reprint—more than could be expected. *Whitehead's* plan of removing the hæmorrhoidal ring seems to deserve mention; but if it occurs we have not found it. Will the editors allow us to point out that in books like the *Medical Annual* facility of reference is of prime importance; and this is best secured by one copious and accurate general index which shall give, in a single alphabetical series, a reference to the page at which every subject, or branch of a subject, may be found. In the *Medical Annual* the articles are themselves in alphabetical sequence, but in two series; and there are two indexes at the end; so that four alphabets have to be searched before one can be sure that one has overlooked nothing. The other, and the only other, weak point in these works is the number of misprints, which though in most cases unimportant, are unusually abundant. Proper names fare somewhat badly. In the reprint we find "*Hebras's* prescription," page 41; and "*Dugardin-Beaumetz*," page 384; and "*John Hopkins*," page 218. At page 124 of the *Annual* there is "*Microsporon Andonini*," so that M. Audouin is in danger of losing whatever immortality his precious fungus may confer upon him. *Urethan*, which is spelt correctly at page 105, appears four times on pages 552, 553 as *urethran*, a word of quite a different suggestion. In the list of brain-tumours at page 140, Dr. Hale White is made to speak of five "*gruma*." Not being acquainted with tumours of that name, we turned to Dr. Hale White's own paper (*Lancet*, 25th September, 1886, page 597,) where five *gummata* are duly chronicled. "Injection" of shell-fish (page 485), is surely meant to be *ingestion*. "*Cerri oxalat*:" at page 11 of the earlier volume is a misprint; and "*Spiritus limonis*," page 14, is not in the P. B. Such trifles as "*Xanthum*," page 428; and "*Porra's operation*," page 432; and "*Teleangiectasis*" may just as well be rectified. At page 505 of the *Annual* begins a kind of *Pharmacopœia* of New Foods or list of medicinal delicacies and pretty preparations wherewith a doctor may often gratify a delicate patient. The "composite concentric pills" designed to act successively on different portions of the intestine, if they can be depended on to dissolve at the right places, must be regarded as a step in the direction of precise medication. The powerful remedy prescribed at the head of page 564, if "exhibited" as ordered on a post card, might save one's books but lose one's friends. We anticipate with pleasure the next *Annual* with a comprehensive index and accurately printed.

R. A. CHUDLEIGH.

Inebriety: its Etiology, Pathology, Treatment, and Jurisprudence. By NORMAN KERR, M.D. London: H. K. Lewis.

AN extract from a page near the end of the book gives the best *resumé* of its contents.

"The gist of the whole matter is that alcohol is an irritant narcotic poison, and that intoxicating drinks have an irritant narcotic poisoning property. The majority of persons are not specially susceptible to this poison, but can go creditably through life, steady, careful, limited drinkers, just as multitudes can live in insanitary conditions without ever appearing the worse for such dangerous surroundings. But there are those who are peculiarly susceptible to alcohol, as there are those who are peculiarly susceptible to sewage poison. Such can be total abstainers from intoxicants, or can drink to intoxication, but drinking in "moderation" is an impossibility to them. Of such material are habitual drunkards made. Apart altogether from moral and religious considerations, they are afflicted with a physical disease, which must be met by physical remedies, the chief of which is unconditional total abstinence from all intoxicants in all circumstances. Even when life itself appears involved, the risk inseparable from the smallest sip of an intoxicating liquor is so great, that the experienced and judicious physician would administer to such an one an intoxicating remedy only with fear and trembling."

The position taken by Dr. Kerr and many other physicians in reference to the nature of inebriety, marks an era in the history of temperance. Hitherto the treatment of inebriety has been empirical, some recommending the "pledge" and moral suasion, others legislative enactments, and others trust in the general advancement of education and enlightenment. Dr. Kerr's book puts the whole subject on a scientific basis, and enables us to appraise the various remedies which have been proposed at their true value, and recognise the different classes of cases to which they are severally adapted. Inebriates may be divided for practical purposes into three classes. 1. The educated, refined, and highly sensitive men and women. The neurotic type of constitution of which Dr. Milner Fothergill speaks so much. In these inebriety is most distinctly a disease. They are conscious of the miserable thralldom in which they are held, but powerless to break the chain. It is of this class that Dr. Kerr's work largely treats, and it affords the most striking examples of alcoholism as a disease closely allied to insanity. The treatment of these cases resolves itself into total abstinence; and, if necessary, residence in a retreat where strong drink cannot be obtained, till the morbid craving for stimulants has passed away. Along with this the use of such remedies—medicinal, but yet more hygienic—as will bring the whole system to the highest possible degree of health. 2. The next class of inebriates is largely drawn from the weak-minded. The long necked, small chinned youth, with retiring forehead, and bird-like profile, known as the masher, gowk, or spalpeen—silly, vain, indolent, with weak will and no conscience, falls an easy prey to the enticements of the drinking saloon. In him inebriety is not so much a disease as a consequence of a mental condition closely allied to idiocy. Often this condition is a temporary one, marking the transition from boyhood to manhood, and if the youth can be safely piloted over the dangerous period, he may develop into a sensible, steady, well-conducted man—not a genius, certainly, but one of the millions of mediocre people, who do their day's work, whatever it may be, sufficiently well to be worth their salt, and for the rest, at all events "do nobody any harm." If a youth falls during this dangerous period, the chances of his restoration are small indeed, and therefore the importance of fencing round this period of life with as many safeguards as possible. Drink, gambling, and fornication are the unholy

trinity which are at present wrecking the lives of thousands of young men just as they are entering life. It behoves all educators, and those interested in the welfare of youth, to consider how young men can be guided through the dangerous period, and most safely launched into the business of life. Idleness and too hard work, monotonous surroundings, want of a happy home life, want of taste for simple and innocent recreations, or inability to obtain them—these are fruitful sources of ruin to young men, and much good will be done by the reversal of these conditions. We believe it will be found that as a rule that irregular habits are much more rare among young men employed in work requiring the exercise of the intellect, such as the draughtsmen in engineering works, than amongst the employees in draper's shops and the like, where there is no higher exercise of mind than is required in measuring cloth or weighing cheese. We have often tried to realise in thought what the life of a grocer's assistant must be—or worse still, an apothecary's assistant in a country town—but we never could get farther than a vague sense of horror akin to nightmare. When this condition of weak-mindedness is permanent, the subjects of it go to swell the class of those "ne'er-do-wells" that form the skeleton-in-the-house in so many respectable families. The only way that we can see for disposing of these unhappy persons is to infringe the "liberty of the subject" so far as to gather them together in some district far away from public houses; group them in families of a dozen each, and employ them in agriculture. 3. The great mass of habitual drunkards is drawn from the working and artisan class of society. Their drunkenness is neither allied to insanity nor the result of weak-mindedness, but is part and parcel of that low moral condition which makes them take pleasure in cock fighting, prize fighting, and all those debasing pursuits which go to make up the life of the depraved. They drink because it adds to the zest of these pleasures. They drink because it makes them forget their care and labour. Women especially drink because they can for a little forget the worry of their household; and then before long they drink because the drink fiend has got the mastery of them, and they cannot cease to drink even if they would. Such is the condition of millions of the population in the great cities and in the manufacturing and mining districts of these kingdoms. They have been called the lapsed masses, but in our view they are rather the un-raised masses of the commonwealth. They are the uncivilized residuum which has come down from past generations. What the remedy is for this state of things may best be learnt from the study of the history of the past. The writer is old enough to recollect when it was in no wise remarkable for people in the middle class of respectable society to be "elevated." It was just the close of that period when Lords of Session in Edinburgh were famous for being able to see every gentleman of the long robe who dined with them under the table; when it was told of a nobleman that he had his decanters made round on the bottom, so that they had always to be passed from hand to hand; when Hogg could write of the author of *Waverley*, in his young days, that "drunk or sober he was aye the gentleman." The writer well recollects hearing a banker describe how, in his earlier life, when he gave a dinner party, every one went home with "a bottle of port under his belt." All this is changed now, and fifty years have sufficed to bring about the result. Christian effort, temperance effort, the spread of knowledge, and a general change of habits, have all contributed to the reformation. There must be work of

the same kind among the lower stratum of society. Among physical improvements none will be of greater benefit than the better housing of the working classes. Dr. J. B. Russell, Medical Officer of Health for Glasgow, has said, with no less truth than force, "Consider whether, since the world began, man or angel had ever such a task set before them as this—the creation of the elements of a home, and the conduct of family life within four bare walls." Yet this problem has to be solved in forty thousand single rooms in Glasgow. Is it any wonder that men and women in such circumstances drink in the very madness of despair. Let better houses be put within the reach of the poor, and an immense impetus will be given to the work of those devoted men and women who are "on the night shift," as one has called it, labouring to rescue their fallen brothers and sisters. It will be possible then for the rescued to lead decent wholesome lives.

These are some of the reflections which have been suggested by the persusal of Dr. Kerr's work. It is a book to study for oneself, and we think that every medical man who desires to fulfil his duty faithfully to his patients, will possess himself of it. The time has gone by when a case of inebriety can be passed over with the remark that "the poor fellow is no man's enemy but his own." To neglect such a case has become as criminal as to neglect a case of enteric fever or pneumonia.

A. W. WALLACE, M.D.

Vaccination Vindicated. By JOHN C. McVAIL, M.D., D.P.H. Camb. London: Cassell & Co., 1887.

THIS volume, of 176 pages, professes to be, and is, "an answer to the leading anti-vaccinators." It was begun merely as a reply to Dr. Alfred Russel Wallace's monograph on the subject, and has developed into a full and complete commentary on much of the anti-vaccination literature of the day. The author has performed the self-imposed and irksome task of reading all such writings, and has been struck by the very narrow compass within which the whole argument against vaccination is carried out. Few medical men have time to undertake the labour of rebutting the various misrepresentations of which vaccination is the object. There are some things which are so well grounded as to rank with axioms, and do not need constant criticism. The history of vaccination gives it a claim to rank with those axioms which may be taken on trust, and on which the mind need not be left open for further evidence and enquiry. The author has constructed a work which may form a handy reference book to those who are unprepared to refute every assertion that may be made. He believes it to be "the duty of those who know the value of vaccination, who understand the danger against which it protects, and who are satisfied of the all but complete harmlessness of the operation," to teach "the truth about vaccination, the truth as demonstrated to Parliament, the truth as learned by ever growing experience of men who give their lives to learning it, the truth about a duty which cannot be neglected except at the price of indefinite suffering and loss of life." He pleads for "instruction of the people in the matter of vaccination, instruction by the teachings of history, if that will suffice, otherwise by the removal of obstacles to direct experiment, which may convince the sceptical, if they are able to be convinced; but surely not, if our best endeavours can prevent it, by leaving helpless children to die by thousands from small-pox, as assuredly they will die if a large unvaccinated community of them be permitted to grow up in our midst."

R. S. S.

Short Notices.

Notes on Dental Surgery. By J. SMITH, M.D., LL.D., F.R.C.S.E. Edinburgh: Maclachlan & Stewart.

THIS is a little book of seven chapters, giving in seventy-six pages "a compilation of memoranda" on the anatomy, physiology, pathology, and treatment of the dental apparatus. His idea that caries "may be and is originally a vital action set up in the dental tissues"—"a true pathological lesion"—is incompatible with the more modern views as to its nature. The chapters on extraction, on filling, and on anæsthetics, leave little to be desired. As regards the production of anæsthesia, we hold that this should always be the work of some other person than the operator, and that inasmuch as the production of absolute insensibility must always of necessity imply some little risk to the organism, the anæsthetic should always be in the hands not of the youngest and most inexperienced medical man, but of one who is thoroughly familiar with its properties and uses.

R. S. S.

Outlines of Qualitative Analysis. By GEO. W. SLATTER, A.R.C.Sc., F.I.C., &c. London: Thomas Murby.

THE number of books on this subject is increasing rapidly; the supply must already be in excess of the demand. While this reflection will give small comfort to authors and publishers, a little is afforded to the general body of students, as there appears some likelihood of the best books surviving and being of use. It is in the latter class that we unhesitatingly place Mr. Slatter's book. His long experience as a teacher at the Salt Schools, Shipley, enables him to give the various tests and reactions in a manner which will be of decided use to young students. Directions are given for preparing the reagents to be used in the laboratory, and also for finding all the bases and acids which are usually included in a course of qualitative analysis. In the 140 pp. we are unable to find a useless paragraph.

W. ACKROYD, F.C.S.

On Infant Feeding and Infant Foods. By JAMES McNAUGHT, M.D. Small 8vo., pp. 72. Manchester: John Heywood, 1888.

THIS is a little book containing a very large amount of valuable information upon the subject of which it treats. The fatal consequences of improper feeding are herein clearly set out, while the facility of averting these evils is shown to be derived from the knowledge of the ordinary facts connected with the process of digestion. Judicious directions as to the feeding of infants are given, and enforced by a concise summary of the physiology of digestion. The rules by which artificial feeding is to be guided are fully expounded, and illustrated by a description of the substances which may safely be employed for that purpose. We cannot doubt but that this little treatise will prove of the greatest value to young mothers and to nurses. We could have wished to have met with a protest against the use of long India-rubber tubes with the feeding bottle. An American writer forcibly—but not too forcibly—expressed his opinion of these by the remark that Herod would have rejoiced had he only known the use he could have put them to, had they been known in his day.

W. B. KESTEVEN M.D.

The Provincial Medical Journal,

MAY, 1888.

WHILE medicine is advancing entirely on new lines, opening out new fields undreamt of by our ancestors, it, at the same time, shows a tendency to revert to some of the methods so much in repute amongst the earlier practitioners of our art. HERODICUS, surnamed the Gymnastic, and said to have been an instructor of HIPPOCRATES, was one of the earliest of the regular physicians to recognise the advantages of bodily exercise, not only in the treatment of disease, but in the preservation of health, and he was followed by the great master, HIPPOCRATES, who, in his turn, was also followed by the minor lights of ancient medicine. The modern system of massage finds its counterpart in the process of friction or inunction, indulged in by the Greeks and Romans, who recognising the great advantage of baths, also added to them friction. In the Turkish bath, under the name of champooing, massage has been long practised, and what is now a modern fashionable custom, is in reality only a revival. Massage in gynæcology naturally follows in the current, and is but a special application of general principles, and is part of the revival. Professor VULLIET, Geneva, in the *Journal de Médecine de Paris*, 8th April, has a long article on the value of massage in gynæcology, so that it is evident the method is receiving the attention of regular practitioners, and is being rescued from the hands of empirics. Professor VULLIET tells us that THURE BRAND, who is not a medical man, deserves the credit of introducing this method, for the absorption of old pelvic exudations and to connect uterine deviations, and that, though BRAND's manipulations were characterised as indecent and brutal, yet the method possesses a real efficacy. SCHULTZE intrusted some patients to Dr. PROFANTER, who was one of BRAND's disciples, and satisfied himself so far on the efficacy of the manipulations, as to guarantee the authenticity and faithfulness of the plates with which PROFANTER has illustrated his work, "Die Massage in der Gynækologie," Wein, 1887. Professor VULLIET, about two years ago, took up the study with some doubt, and now is able to state that, after having gone through an apprenticeship, he has succeeded in curing, by massage, many of those patients who go from one specialist to another, and whom he had vainly treated by other methods. The gynæcological masseur, according to M. VULLIET, must be acquainted with massage in general, must be a good diagnostician, must have a fine tactile sense, and must have patience and perseverance. The manipulations must be made with both hands externally, or with one in the vagina and the other external. Special attention must be paid to the state of the nails, gentleness, firmness, and evenness of touch, are evidently required; the mottoe should be "*festina lente*." The chief indications for uterine massage are infiltrations, rigidity, mal-positions of the uterine surfaces, or adjacent parts, and these have to be brought into a state of suppleness, or corrected by gentle

stroking, pressure stimulation, both hands acting in some cases externally, or sometimes one hand in the vagina, and the other on the abdominal walls. We need not wonder that BRAND was accused of practising a method so liable to abuse as the one described by M. VULLIET. It is well known that in a certain class of cases the speculum became a source of pleasure, the continued use of it brought on a habit; so that the speculum, useful and admirable under certain circumstances, became a reproach to obstetrics and gynæcology. The new system, in the hands of the empiric, may be used for most improper purposes, and is certainly one, as Professor VULLIET insists, only to be used or employed with due precautions against excitement. The wave of fashion is now sufficiently directed to general massage, and we have had revelations that even the general application of it has been very much abused, so that a caution is needed against the more special application which Professor VULLIET so strongly advocates.

ANTIPYRIN, though a patent medicine in every sense of the word, has been taken up in nearly every country; it has been used both scientifically and empirically. It has had the good fortune to have been introduced to the profession by presumably men of good position, and in the profession, as in society, an introduction has its value. The new chemical has not, perhaps, had the popularity of cocaine, but its literature approaches it very closely in magnitude. Cocaine has been relegated into its proper sphere of usefulness, and is now a standard preparation. Antipyrin will have to go through the necessary sifting process, and will in due time have also its proper rôle. Meantime, it may not be without profit to look at some of the uses to which it has been put. Dr. THOR, of Bucharest, has found antipyrin an excellent substitute for bromide of potassium in nocturnal emissions; it is preferable, as it does not produce acne. He prescribes from seven to fifteen grains just before going to bed. He prefers the tablet form. Also in cases of the so-called sexual neurasthenia of BEARD, the same drug has proved very useful, but it requires larger doses. Dr. THOR commences with sixteen grains a day, and gradually increases to about thirty grains. It is used in this condition as an anti-spasmodic, under which heading it has been employed by GERMAIN SEE, who, moreover, claimed for it a place filled by morphine. It has been employed to relieve the pain of colic, gout, rheumatism, toothache, and we publish this month a communication in which its use for migraine has been pointed out, thus bearing out the observations, already made in France and America, with the drug for the same affection. We need not wonder that it should have been tried in whooping-cough and sea-sickness, and that it should have been praised in both complaints. Chorea, epilepsy, mania, asthma, dysmenorrhœa, hay fever, etc., have also been treated by it with satisfactory results. We thus see that it is going through the process of being written about, and that it is still in the experimental stage. When first

introduced, studied by DEMME and FILEHNE, its antipyretic properties were those which were chiefly observed. Subsequent investigations have confirmed the accuracy of these observations, and it soon displaced antifebrine. Antipyrin is not without its dangers. Symptoms of poisoning have occurred after its use, and it brings on vomiting, nausea, extreme and alarming prolapse. Some patients, owing to some idiosyncrasy, are peculiarly susceptible to the influence of antipyrin, and, unfortunately, we cannot estimate this until they have taken the drug; so that those who use the medicine should bear this fact in mind, and be prepared for any symptoms which may arise in the form of catarrh, gastric pains, urticaria, and great depression in temperature. It may be possible that in many cases of poisoning reported, the best antipyrin had not been used, though we believe that usually the patented article has only been employed. KNORR's antipyrin is sold in little tins, so that it is possible to know the source of the specimens used. KNORR is, we believe, a medical man, and as he found out this new body whilst experimenting with quinine, he considered it justifiable to reap a trade advantage from it. According to some of our French exchanges, we learn that the French physicians do not consider themselves bound to respect Dr. KNORR's patent, as it is against French laws to have a copyright in medicines; so that manufacturers in France will be able to make antipyrin, and sell it to French physicians.

THE new Local Government Bill is imperfect in leaving the Sanitary Service in almost its present piecemeal condition, and we might almost say it is retrograde. We want some such system or project as that suggested by Dr. HENROT, Professor at the School of Medicine, and *Maire* of Reims. It may be useful at the present time to bring the scheme under the notice of our legislators, and we publish a translation of it, a modification of which might be applied to our own conditions. Dr. HENROT's scheme is embraced under the following heads:

SANITARY LEGISLATION.

I.—Revision and completion of laws, decrees, and rules, concerning sanitary legislation—viz., to enforce laws against epizootics, etc.; to modify existing laws; to compel (a) declaration, (b) isolation, and (c) disinfection:

- (a) A declaration of the names of persons suffering from infectious or contagious disease shall be made to the *Maire*, within twenty-four hours, by the head of the family, or the senior member thereof, or in default by the proprietor or housekeeper, or in default by the medical attendant.
- (b) Isolation of persons suffering from contagious disease, disinfection of apartments, objects of clothing and bedding, shall be obligatory.
- (c) Persons suffering from contagious disease, small-pox, scarlatina, etc., shall not expose themselves on highways, attend school, etc.; penalty from 16 to 300 francs, or imprisonment from six days to six months for violation thereof.

Unhealthy dwellings to be attended to, vaccination or re-vaccination to be obligatory, creation of houses of isolation, to be embraced in this plan.

II.—The first service to be Communal, under the *Maire*, and at the cost of Commune, and to be constituted as follows:

- (a) Communal Council, (b) Bureau of Hygiene, (c) Communal Medical Sanitarian.
- (a) This to consist of (1) Council of Surveillance, (2) a Commission on Unhealthy Dwellings.
 - (1) The Commission of Surveillance to be presided over by the *Maire*, to carry out the application of measures of hygiene, and to consist of from ten to twenty members—doctors, chemists, engineers, veterinarians, pharmacists, *industriels*, to meet annually, or as often as necessary, to draw up bi-annual reports.
 - (2) The Commission to look after dwellings, and report bi-annually.
- (b) A Bureau of Hygiene to be established, presided over by a Doctor in Medicine, to be nominated by the *Maire*, to direct service as to prophylaxis, statistics, to send each day to departmental bureau a sanitary bulletin, and publish an annual report. To have under his orders (1) the chief of the bureau; (2) the sanitary medical officers charged with registration of deaths, inspection of schools, and the sanitary surveillance of the different districts; (3) the veterinary inspector, and the inspector of *abattoirs* and eatables; (4) the inspectors of dwellings, establishments, water-closets, etc.; (5) the surveillance of infants, and children in manufactories; (6) the employés in the work of disinfection; (7) the archives; (8) plans, apparatus of all kinds, the laboratory of chemistry, microscopy, bacteriology; (9) the application of the law of declaration, isolation, and disinfection; (10) the homes of isolation, lodgings, etc.
- (c) A Communal sanitary physician to be provided for the *petite Commune* to discharge similar duties.

III.—A Departmental Bureau to be established under the Prefect, and to be carried on at the cost of the department, to consist of:—

- (a) A Departmental Council of Hygiene, to be presided over by the Prefect, made up of the hygienists of all the departments, with twenty or thirty members, as doctors in medicine, professors of hygiene, engineers, pharmacists, veterinarians, or *industriels*, to meet twice a year, or as often as the Prefect deems necessary, to publish an annual report, and have surveillance of the Bureau of Departmental Hygiene.
- (b) A departmental sanitary physician, a diplomate of public health, to be appointed, who shall have the following powers: (1) He shall be chief of the bureau, and be nominated by the Minister of the Interior, on the recommendation of the National Council of Hygiene; (2) shall be medical adviser in case of epidemics in the department; (3) vice-president of the Council of Hygiene (presidency reserved for the Prefect); (4) Director General of Public Health in the Department; (5) Inspector General of Sanitary Medical Officers and of the Directors of the Communal Bureau of Hygiene; (6) Inspector General of Dwellings, insalubrious or dangerous; (7) Inspector of Human or Animal Vaccine; (8) Inspector General of Infants, Children, and Minors employed in Manufactures; (9) Inspector of Public Establishments, as Lyceums, Hospitals, Asylums; (10) Inspector of Public Works, as Water Supply, Sewerage, etc.; (11) Inspector of the Bureaux of Statistics and Demography.

Obligations.—(a) To receive the daily sanitary bulletins sent by the Communal sanitary officers; (b) to send every fifteen days a report of the sanitary state of the Department to the Minister of the Interior; and (c) to prepare an annual report for the Council of Departmental Hygiene.

- (c) A Bureau of Departmental Hygiene to be established with a chief and laboratory under the Council of Departmental Hygiene. The organisation to consist of a number of employés proportionate to the importance of the department, with library, archives, and with material, apparatus, plans, etc. The laboratory to be fitted up for chemical and bacteriological research.

IV.—A National Council to be established under the surveillance of the Minister of the Interior, and to be carried on at the expense of the State. This Council to be made up as follows: (a) By the Academy of Medicine, which shall constitute the Grand Council of Public Health, and make an annual report of sanitary matters in France. (b) The sanitary general administration shall be under a *chef de division*, who shall be a medical man. There shall be then two sub-divisions: (i.) public assistance; (ii.) public hygiene.

(i.) The first shall consist of a National Council of Public Assistance, of fifty members, nominated by and presided over by the minister, two senators, two deputies, two members of the Academy of Medicine, two members of the Institute, two members of the Faculty of Medicine, other medical men in the civil and military hospitals, engineers, etc.; and this Council shall report annually. There shall be a Medical Director General, who shall control and direct and carry out the necessary sanitary inspection and surveillance.

(ii.) The National Council of Public Hygiene shall also consist of fifty members as above, and shall have also a Medical Director General.

(iii.) There shall be a Central Bureau, comprising (1) a department exterior and international, to look after congresses and international exhibitions, exotic diseases, quarantine, lazarettes; (2) a service of statistics and demography; (3) a service of the Interior, which shall regulate all matters relating to the health of towns, water supply, public health works, schools, prisons, etc.; labour of adults and children, vaccination, foods, drinks, and, in fact, everything that falls within the province of our English Local Government Board.

This scheme of Dr. HENROT is elaborate, but it has a unity, and is well worthy of consideration. We could easily apply the principles underlying his plan to our English conditions: (1) Beginning with the Commune, the parish or town, we should have the Poor-law medical officers, medical officers of health. They are already appointed over areas, and they best know where disease exists, or where it starts into existence. The Poor-law medical officers did the work of sanitation in England before STANSFIELD'S Act was introduced. The value of their work may be seen by consulting CHADWICK'S report on the "Labouring Classes." They would have to report daily or weekly to a county authority. (2) There should be a County Supervising Medical Officer, who would have as his sub-officers the local medical officers of districts, and who would perform all duties incidental to such a position, and who would report to the Central Bureau, the Local Government Board, London. (3) The Local Government would have its principal medical officer, staff of consultant medical officers, who would be in touch with the whole country by the local medical officers. We should thus have a unified system, and one worthy of a country which spends millions a year on sanitary work.

WE published in the April number the full text of the new Warrant, establishing a Volunteer Army Medical Reserve. Those who have followed the history of the volunteer movement, so far as medical men are concerned, will recognise in this Warrant a first instalment towards the building up of a medical service which shall serve the country in any great national emergency. The Warrant does not give us all we require, but it is the

thin end of the wedge, and we may reasonably hope that further concessions will be made, which will satisfy not only the volunteer medical officers, but the Army Medical Department. The Militia Medical Staff has now virtually ceased to exist. It was only to be expected that an attempt would be made to supply its place. The volunteer medical department has, by the exertions of a few active men, risen from a position of comparative uselessness into one of even great national importance. In the early days of the volunteer movement surgeons were attached to corps, to which they could only be considered as ornamental appendages. They wore uniform, appeared on parade, attended regimental dinners, but they had nothing to do; they had no medical transport, bearers, or stretchers; they had no system of drill, no organisation. Even so lately as the Windsor Review, few regiments at that great assemblage possessed means of dealing with the sick members of their corps. The nucleus of a medical corps was then formed, and Lieutenant MACLURE had a small staff of bearers and ambulance waggons, and it was seen then what great possibilities lay in the development of the movement which he initiated. Since that time events have moved on rapidly. The War Office has recognised the Volunteer Medical Department. It has granted to each regiment two bearers per company. It has formulated a scheme of drilling and examination, granted certificates, and the right to wear the red-cross badge to those who have passed a qualifying examination. Still more, it has assisted in the formation of a Volunteer Medical Corps, having an autonomy of its own, and leaving the regimental system untouched. All this has been accomplished by the activity of volunteer surgeons, but their activity would not have been of much use had they not been assisted by the medical officers of the regular army. Army medical men have thrown themselves into the new movement, have given lectures, carried on classes, and in every way favoured the new departure. Surgeon-Majors EVATT, SHEPHERD, and others, must have clearly seen what would be the ultimate end of this movement, so that army medical men need not be surprised that Government have endeavoured to bring into use the material created. The militia surgeons have had the charge of troop and stationary hospitals, and depôts. In some cases civilians had charge of troops. In view of the gradual extinction of the militia medical officers, the Government desired to find substitutes in the volunteer medical officers who had educated themselves in army medical work, and who had obtained certificates of proficiency, so that, as we have said, the Warrant is purely the result of what has been done by the army medical officers themselves, at the initiative of the Volunteer Medical Service. The English Army is built up on the selective principle: we take whatever we find best in other army systems, and graft them on our own, whether in the shape of clothing, weapons, or drill; and the Army Reserve scheme appears to us to have been copied from the German system, where behind the regular army medical staff, they have a strong reserve in case of

any grave national emergency. The conditions of service under the new Warrant are much the same as those by which volunteer medical officers are now bound. Surgeons attached to volunteer regiments would have, in any grave emergency, to go with their corps to any place ordered, and no more is expected under the new Warrant. We consider that the new scheme should be accepted, trusting that it will be subsequently modified and improved.

Annotations.

"Forsan et hæc olim meminisse juvabit."

SEWING MACHINES.

THE sewing machine has been blamed for producing affections of the uterus, and there is very strong evidence brought forward to substantiate the charge. The position of the operators, the height of the seat and the nature of the chair, the condition of the machine, have a great deal to do with the ill-effects resulting from long-continued use of these useful machines. Dr. Bates, of Alliance, Ohio, tells us that women might save themselves a great deal of suffering by attending better to the lubrication and cleaning of the mechanism. If a machine is clogged up with thread, etc., or is rusty and dirty, it will not work easily, and will require a considerable amount of constant propelling power. We believe that Dr. Bates' advice is sound, and that a clean, easy running machine, requiring only a slight degree of force on the treadles, will not be injurious. There is another point of importance—viz., that tight corsets should not be worn, especially if the operator has to bend over the machine.

THE SALE OF PATENT MEDICINES.

WE learn from the *Medical Record*, New York, that a Bill for prohibiting the sale of patent or secret medicines has been introduced into the Assembly of the State of New York, by Mr. J. W. Smith. It provides that no person or firm shall sell any medicinal preparation without filing the formula of the preparation with the State Board of Health, and receiving a license or certificate from that body. It further provides that no so-called secret or proprietary medicine shall be sold, unless there is a printed formula showing the nature of the compound on the bottle, and also the words, "Sale authorized by New York State Board of Health." In view of the revelations about a secret remedy published in a late number of the *New York Medical Journal*, it was time that some such regulations were passed.

THE CASE OF DR. MARSHALL.

A MEETING of medical men was held at the Croydon General Hospital on March 28th to hear a statement from Dr. E. Marshall, on his dispute with the Holborn Board of Guardians. Dr. Marshall has been medical officer of the Holborn Union for thirty-two years, and he has been threatened with dismissal for an alleged neglect of duty in not giving sufficient time to his patients. The meeting

was largely attended, with Dr. Alfred Carpenter in the chair, and after hearing Dr. Marshall's statements, the following resolutions were unanimously passed:—1. Moved by Dr. Coles, and seconded by Dr. Hearnden: "That having heard the statement made by Mr. Edward Marshall, and the correspondence which has passed between him and the Holborn Board of Guardians, this meeting is of opinion that the action of the Holborn Board is unjust to an old and well-tried officer; that the circumstances in no way warrant the action which that Board proposes to take; and that the President of the Local Government Board be requested to refuse his consent to the proposed removal of Mr. Marshall from his office." 2. Moved by Dr. Parsons, seconded by Dr. Wilton: "That it is only a matter of justice to the medical profession that medical and sanitary officers who have fulfilled their duty to the satisfaction of a local authority should be entitled to some superannuation according to their length of service, and the duties performed." 3. Moved by Mr. A. Kelsey, and seconded by Mr. Moger: "That this meeting is of opinion that no sanitary or medical officer holding office under any public authority should be removable except for grave neglect, or for some other cause which has rendered him incompetent to perform the duties of his office." This meeting was most creditable to the practitioners of Croydon, and we trust that Dr. Marshall will have the whole support of the Poor-Law Medical Officers' Association.

THE PREVENTION OF HYDROPHOBIA IN FRANCE.

THE key-note we struck on the Pasteur treatment was contained in the following paragraph: "Something more is required than even a remedy for hydrophobia. Even though Pasteur gave us a remedy against the bites of rabid dogs, yet we have something more to do: we have to extinguish the disease in the dog" (p. 49 "M. Pasteur and His Methods," 1886). The English Hydrophobia Commission in their conclusions repeated this; the Committee of the House of Lords re-echoed it, and now the French Academy have taken up the note. The following resolutions were adopted at a recent sitting of the Academy: "Considering that the number of cases of canine rabies are increasing in the Department of the Seine, and even in France, the Academy requires the urgent adoption of the following measures: (a) Utilisation of the police, or the creation of a special staff to look after dogs; (b) obligatory wearing by dogs of a badge showing that dog tax has been paid; (c) vigorous application of articles 53 and 54 of the decree of 22nd June—viz., (1) the administrative authority may order that all dogs shall be muzzled or led by a string; (2) when a case of rabies has appeared in a commune, the mayor may issue an order that for six weeks at least dogs should be led by a string." These conclusions conclusively justify our position. The following report had been received from Holland: "The Government has had knowledge of twenty-three cases of persons bitten by animals rabid, or suspected of rabies, twelve of whom underwent at Paris the anti-rabic treatment

of Pasteur, out of which number one died—namely, a boy aged thirteen, bitten by a rabid cat, on June 13th, 1886, who underwent twelve inoculations. The eleven remained at home, and have remained perfectly well. These results are absolutely unfavourable to the method, since the only death registered from rabies during 1886 belonged to the series treated at the Institute.” The death-rate in France continues at a high rate. The number of patients from foreign countries have notably diminished, though the number of dog-bitten persons is not on the decrease. The increase in France is admitted by the French Academy. Nine deaths took place in 1887 in the Department of the Seine, the average being five for a period of thirty years. M. Pasteur’s inoculations have been tried in every conceivable form. Discredited in America, Germany, Austria, and Portugal, condemned in Holland, and we believe in Belgium, damned with faint praise by the English Commission, M. Pasteur’s disciples still strive to keep the system alive, but it appears to us the method has received a severe check from the recent utterances of the Academy of Medicine. When patients died after the treatment, it was alleged that they came too late—three days or a week after the bite. This excuse can hardly apply to Alphonse Marinot, who commenced the treatment *one hour* after being bitten. A soldier of the 29th Foot Regiment, he was bitten on February 17th, 1888, by a dog suspected of rabies, which he was anxious to kill. He was immediately conducted to the Institute Pasteur, and followed the treatment with the greatest regularity up to March 16th, when he was discharged “cured” by M. Grancher. On the 29th of March Marinot was seized with pains at the seat of the bite, dying on the 1st of April at Val de Grace, with all the symptoms of rabies. Two other patients have died recently.

FREE TRADE IN SURGICAL INSTRUMENTS IN AMERICA.

THE State Medical Society of Georgia has drawn up a petition, to be presented to Congress, urging the repeal of the tax on surgical instruments, appliances, etc. The reasons for the change will be at once agreed in by free-traders, and by foreign manufacturers, but we fear that there is not much probability of this petition being accepted. Those who have axes to grind in America will strenuously oppose the introduction of foreign-made articles free of duty. The American public must be content to pay an increased price, even for inferior articles, to keep up monopolies.

THE DEGREE OF M.D. FOR PRACTITIONERS.

WAITING for the establishment of the new University in London, students will have to content themselves for some years to come with licenses from the College of Surgeons and College of Physicians. This is hardly fair upon them, and we wish we could see some way out of the difficulty. It is clear that the M.D. is now a desideratum. There is a very important letter in the *British Medical Journal*, April 14th, which states that a petition is to be presented to the Senate of the St. Andrew’s University, praying that

all medical men of ten years’ standing may be eligible for the practitioner examination for the M.D. degree, without restriction as to age or residence. The Senate would not oppose such a scheme; if it were well supported by a large number of names. Already one petition to this effect has been lodged, containing the names of representatives of nearly every British University, who, whilst not desiring a change for themselves, support it as a means of justice to others. The letter is signed by Mr. B. Jones, Leigh, Lancashire, who will receive the names of all those who are in favour of the change.

SHOULD MEDICAL MEN TAKE OUT PATENTS?

THIS question is at present exercising the medical mind. It has been the custom for medical men not to patent instruments, appliances, etc., but now this rule is frequently broken. Medical men have always secured a copyright for their books, and some of these copyrights have been valuable. Custom has sanctioned this practice, and it is to custom we must appeal. It is for the profession to make its own rules; it does not follow because copyright has been sanctioned by the profession, that therefore it is justifiable to secure a patent for an instrument. Analogy does not here hold good. The best traditions of medicine are certainly associated with the non-patenting of anything that can be useful to mankind. Our predecessors have given us some of the very best instruments and appliances, free from any restrictions, and they threw their talent and inventions into a common fund, upon which all can draw. The custom of the profession is now, not to patent instruments.

THE HORSE TAX.

THE hostility to the new horse tax has fortunately resulted in a decision, that medical men who use their horses for professional purposes and not for pleasure, shall not be liable to the tax. The number of petitions against this obnoxious duty has evidently had a good effect.

SUPERSTITIONS ON THE HOHENZOLLERN FAMILY.

THE physicians of the Emperor would be able to form a prognosis as to the result of the Emperor’s illness if the following legend were true: It is said that before the death of any of the Hohenzollerns a white lady appears. More or less apparently well authenticated cases of the apparition of the white lady at Berlin have occurred in 1840 before the death of Frederick William III., and in 1861, previous to the death of Frederick William IV. We fear that the days of the Emperor are numbered, in spite of the skill of his attendants. There is just as much reason to believe in these superstitions, and as much groundwork for investigation, as in the recent elaborate inquiry into the researches of M. Luys, instituted by the French Academy. If little bottles of medicine, filled with such fluids as morphia and prussic acid, can influence a patient at a distance, as claimed by certain scientists, then certainly there is no reason why disembodied spirits should not revisit the earth. It all depends on the IF.

New Remedies.

THE chemistry of *Strophanthus seeds* is still under discussion. The statement by M. Adrian that the glucoside strophanthin splits up into an alkaloid and glucose has been objected to as inadmissible, since strophanthin contains no nitrogen. M. Catillon affirms that these seeds contain another glucoside, which is nitrogenous, and which yields an alkaloid when treated with acids. He finds that when the seeds that have been exhausted by alcohol and ether are treated with boiling acidulated water, they give up a considerable quantity of a glucoside, associated with a well-marked alkaloid, which latter has, however, only been obtained as yet in the amorphous state. The varieties of seeds which are now being sent to Europe appear to differ considerably from each other. One of these, which M. Catillon refers to—*Strophanthus glaber*—is found to contain about 5% of a strophanthin, which differs from that yielded by *Strophanthus Kombe* in its crystalline form, which is that of four-sided lamellæ, the sides measuring one to two millimetres, whereas that of *Strophanthus Kombe* is in acicular crystals. It also is not precipitated by tannin, and is not coloured in the cold by sulphuric acid, but when heat is applied it exhibits a red colour, passing to green. If a little solution of perchloride of iron be added, and heat applied, the green colour is produced immediately. In this respect it differs from digitalin, which under the same condition gives a blue colour with hydrochloric acid, and when heated, it affords a yellowish green colour. The strophanthin of *Strophanthus glaber* is non-nitrogenous and toxic.

Several reports have recently been issued concerning the anæsthetic action of *Erythrophlaine*, of which one of the most important is that of Professor Kaposi, of Vienna, who has used it sub-cutaneously in seventeen cases. In doses of two and a half to ten or twenty milligrammes it produced, after about fifteen minutes, local anæsthesia, which lasted from one to three hours; this was restricted to a small central zone of the injection area, the larger marginal zone being paræsthetic. Local symptoms of irritation and smarting were produced by even the smallest doses, and sometimes lasted for one or two days. Doses of twenty milligrammes caused general symptoms of poisoning, after periods varying from fifteen minutes to an hour, evidenced by dilation of the pupil, dizziness, weakening and slowing of the action of the heart and pulse, quickening and shortening of the respiration, nausea and vomiting, the symptoms continuing for several hours. It is obvious, therefore, that this powerful alkaloid does not present any advantages as an anæsthetic, especially having regard to the smallness of the dose, which produces poisonous symptoms.

Some light has been thrown on the uncertain action of *Cocaine* by the investigations of Dr. B. H. Paul, who has shown (*Pharmaceutical Journal*, p. 781) that the alkaloid is now chiefly prepared from crude alkaloid imported from Peru, and that it is likely to vary in quality according to the price paid for it, it being impossible to prepare it in a perfectly pure state at the low price at which it is sometimes sold. He has, however, placed in the hands of all who desire to obtain the pure drug a ready means of ascertaining its freedom from impurities. He states that when a few drops of ammonia are added to a solution of cocaine hydrochlorate, the alkaloid should be precipitated in a crystalline condition, leaving the supernatant liquid quite clear; whereas, if amorphous alkaloid be present, the supernatant liquid remains milky for some hours. Another test consists in evaporating a solution of the suspected hydrochlorate of cocaine. If the amorphous alkaloid be present, the solution becomes acid to test paper. The solution of the pure hydrochlorate may be evaporated to dryness without the slightest trace of acidity being developed. The difficulty in preparing the hydrochlorate of cocaine in a pure state is due to the fact that the same re-agents precipitate the amorphous alkaloid at the same time. The pure alkaloid cocaine can, however, be much more easily purified than the salt, inasmuch as it is very sparingly soluble in water or dilute alcohol, while the amorphous alkaloid is more soluble; hence, on adding water to a solution of the crude alkaloid in strong

alcohol, the pure crystalline alkaloid is precipitated, and the amorphous alkaloid left behind. Under these circumstances, if due care be taken pure cocaine is easily obtained. Dr. Paul has, however, pointed out that if cocaine be left in contact with ammonia, or even if it be heated with alcohol or water, it is liable to be split up into benzoyl-ecgonine. The hydrochlorate is, however, much more stable, and if pure, undergoes no alteration when its solution is evaporated to dryness.

Calycanthus glaucus, popularly known as Carolina allspice, the bark of which is said to be highly esteemed in Virginia as a domestic remedy for intermittent and malarial fever, has recently been found to contain 2% of an alkaloid in its seeds. Although the physiological action of the alkaloid has not yet been investigated, it seems highly probable that it may possess some medicinal activity, since its discovery was led up to by the supposed poisoning of cattle from eating the seeds of the shrubs.

The discovery that oil of tansy (*Tanacetum vulgare*) produces symptoms closely resembling those of hydrophobia has been followed up by M. Peyraud, and the further discovery has been made that a subcutaneous injection of the oil is sufficient to prevent the action of the virus of hydrophobia when administered subsequently. In his experiments, four rabbits were treated with oil of tansy, and then inoculated with the virus of rabies, but no symptoms of hydrophobia were manifested even nine months after inoculation, although two other rabbits, which had not previously been subjected to the action of the oil of tansy, were killed by the same virus that was used in the first experiment. The value of the oil of tansy as an antidote instead of preventive, does not appear to have yet been determined.

Another new antipyretic has been added to the already long list of these compounds by Professor Demme. It is named *methyl-tri-hydroxychinoline-carbonic-acid*, and has the formula $C_{10}H_{10}(CH_3)NO_3$. The similarity in constitution of this body to thallin led to experiments being made with it. The compound was used in the form of a sodium salt, made by adding one part of dry sodium carbonate to 3.6 parts of the acid. The diseases in which the salt was tried were croupy pneumonia, acute rheumatism, abdominal typhus, tuberculosis, erysipelas, acute endocarditis, and pericarditis, and the patients were from four to fifteen years of age, the dose given for patients up to six years old being two grains, and up to twelve years four grains. So far as could be ascertained from these experiments it appears that the new compound possesses some antipyretic properties, and also has some effect in increasing the blood pressure.

Dr. W. Leonard Braddon has pointed out (*Lancet*, March 17th, p. 513) that oil of peppermint possesses powerful antiseptic properties, which have been singularly overlooked. Koch, in his researches on charbon bacillus, found that of this drug 1 in 300,000 parts of liquid arrested the development of spores, and that the vapour very quickly killed both spores and bacilli. The results of a series of experiments made by Dr. Leonard led him to the conclusion that oil of peppermint is, within limits of time, one of the strongest and most reliable of antiseptic agents. Being stated to be absolutely harmless to the system in the largest doses it forms the safest, best, and most agreeable of all known antiseptics.

Periscope.

I.—GLEANINGS IN MEDICINE.

By W. B. KESTIVEN, M.D.

Researches into the Pathological Anatomy of the Placenta, in Abortion. By Zinowief, St. Petersburg (*Centralblatt für Gynakologie*, February 25th, 1888).—The following are the results of the author's researches. Hyperplasia of the connective tissue occurs independently of hæmorrhagic deposits. Hyaline degeneration of the placental vessels has not been observed, but a periarteritis is described as the cause of the white patches. Interplacental hæmorrhage is described as diffused or circumscribed; in the latter case the blood fills the network of the connective tissue, and produces atrophy of the placental cells. These cells have been found transformed into a spindle shape. No special disorder of the endothelial cells has been observed. The author

describes a mucous infiltration of the deciduous cells and villi; also fatty degeneration of the same structures. Atrophy of the cells causes a granular appearance of these also. These changes in the cells are among the early steps to hydatid disease of the placenta. In retained placenta, after abortion, the author has found all the above pathological states of cells and villi.

Contribution to the Pharmacology of Cornutine. By Lewitzki (*Centralblatt für Gynäcologie*, February 25th, 1888).—1. In frogs, cornutine, in poisonous doses, induces excitement of the central nervous system, which issues in convulsions, besides which it exerts a special action upon the muscular substance, whereby the cramp of the limb is prolonged. 2. In warm-blooded animals (not impregnated), given in small doses, it effects stimulation of the vagus, with slowing of the pulse, vomiting, diarrhoea, etc. In large doses it causes clonic and tonic convulsions of a severe character, and death from paralysis of the respiratory centres. 3. In pregnant animals (dogs, rabbits, guinea-pigs) abortion is caused by its action on the lumbar region of the spinal cord. The researches of Jacob and Frommel have shown that the uterine contractions are clonic and tonic, and destroyed by division of the cord; in accordance with the conclusions of Von Robert. In women, cornutine seems to be the most certain agent for the exciting contraction of the uterus, whether impregnated or unimpregnated. Especially beneficial have been its effects in uterine hæmorrhage.

Researches on the Connection of the Hypoglossal Nerve in the Medulla Oblongata. By P. Koch, Copenhagen (*Fortschritte der Medicin*, Berlin, March 1st, 1888, from *Archiv. Anatomie*, 1887).—The author submits the following conclusions: 1. There is a connection between the hypoglossal nerve and the olivary body. 2. Stilling's nucleus is in the human subject the most essential part. Near to this is an accessory nucleus which, in birds, plays the most important part. 3. Around this nucleus there is no crossing of nerve fibres. 4. A system of longitudinal fibres, proper to the nucleus, connect the several parts of the hypoglossal nerve, while transverse commissural fibres bring the nuclei of the two sides into connection. 5. The fibres which pass from the nucleus into the nerve-centre, pass through the raphe and extend to the pyramidal tract. 6. It is doubtful whether any connection exists with the lateral columns or nucleus of the vagus, or even with the posterior columns.

On Neurasthenia (*Cleveland Medical Gazette*, Philadelphia, February, 1888).—Dr. Byford explains the etiology of neurasthenia as arising out of defects in the quality rather than of the quantity of blood, which admits of its becoming rapidly exhausted of the material necessary to restore functional action of the nerve-centres. Under this view, it does not seem that absolute rest is so important as full-feeding—the rest does not nourish the nerve-centres, but prevents their expending force as fast as they acquire it. The nerve-cells, Dr. Byford observes, become anæmic, thence nervous exhaustion and neurasthenia.

The Treatment of Writers' Cramp—Limbeck (*Fortschritte der Medicin*, February 15th, 1888).—In a case of writers' cramp, in which massage, electricity, and other means had been unsuccessfully employed, great benefit had been derived from the use of a splint extending to the index and forefinger from a bracelet firmly attached to the forearm, so as to prevent flexion of the hand.

On the Administration of Creasote in Phthisis.—Sommerbrodt and Hopmann (*Fortschritte der Medicin*, March 1st, 1888), reasoning from the antiseptic properties of creasote, the authors have administered this medicine in phthisis, in large doses, continued for many months, during the last six or seven years with satisfactory results.

II.—NOTES FROM RUSSIAN JOURNALS.

By VALERIUS IDELSON, M.D., BERNE.

Strychnine in Alcoholism.—At a meeting of the Novgorod Medical Society, Dr. E. I. Lebedeff communicated an interesting case (*Proceedings of the Novgorod Medical Society*, 1887, p. 33) of acute alcoholism of a (so to say) therapeutic origin, in which he had successfully used tincture of nuxvomica. A previously non-drinking lady, suffering from a severe puerperal parametritis of two months' standing, was advised by her former medical attendant to take occasionally about half a wineglassful of port wine or vodka (aquavit), on account of paroxysms of an excruciating pelvic pain. Since the pain was almost incessant, while, on the other hand, the remedy recommended gave actually a marked, though temporary relief, the lady soon reached a daily dose amounting to about a half a bottle of port wine or brandy. By the end of a month there appeared sleeplessness, hallucinations of sight and hearing of a terrifying character, trembling of the tongue and limbs, an uncontrollable incessant craving for drink—in short, there developed a typical delirium tremens. Frequent doses of tincture of

nuxvomica (the exact dosage not given), and hydrate of chloral as a hypnotic at bedtime, removed all the symptoms (including craving) as swiftly as radically.

Dr. Serghei V. Iaroshevsky, of Samara, publishes his second important paper (*Meditsinskoié Obozrenië*, No. 2, 1888, p. 194) on "Antagonism existing between Alcohol and Strychnine." His first communication on the subject (made at the Moscow General Meeting of Russian Medical Practitioners in 1886, and briefly alluded to in the *Provincial Medical Journal*, August, 1887, p. 372) dealt with clinical and experimental questions concerning sub-acute and chronic alcoholism, and the influence of strychnine on the development of toxic phenomena. A scarcely deniable great practical importance of the matter will probably excuse our returning to the author's former paper, and adducing some interesting details. The first series of his investigations consisted of six experiments (on dogs) of from thirty to 107 days' duration. Three animals (an adult bitch and two puppies) received alcohol alone. The bitch (weighing sixteen pounds) took in all forty-five ounces of a 65 per cent. alcohol (the daily dose varying from half to three ounces), and died on the thirtieth day of the experiment. The puppies, aged twenty-six days, and weighing each about three pounds, took—one eleven, the other twenty drachms of a 42 per cent. alcohol (in the daily dose of from two to four drachms), and both died on the seventh day. The other three dogs (a pregnant bitch, weighing twenty-eight pounds, and two puppies, aged twenty-six days, and weighing about three and a half pounds each) received simultaneously alcohol and strychnine, the latter being injected under the skin in the form of a solution of one grain to one ounce of water. Only one of the animals died spontaneously (on the twenty-eighth day); it was a puppy, which had received in all 146 drachms of a 42 per cent. alcohol (in the dose of from three to twelve drachms a day), and 140 drops of the strychnine solution. The other puppy took also 146 drachms of a 42 per cent. alcohol (in the dose of three to twelve drachms a day), and 140 drops of the alkaloid (in the daily dose of from four to twelve drops). It remained quite well all through, and was killed on the twenty-ninth day of the experiment. The bitch received 706 ounces of alcohol (in the dose of from one to seventeen ounces a day), and 594 Pravaz's syringefuls of the strychnine solution, or 19.8 grains of the alkaloid, the dose varying from one to twelve syringefuls. On the fifty-sixth day the animal gave birth (at full term) to seven healthy puppies. The dog was killed in apparently good health on the 107th day. A direct antagonistic action of the alkaloid was especially strikingly demonstrated in this animal by two controlling experiments. When the dog received alcohol alone in the amount of five ounces of a 65, and twelve ounces of a 42, per cent. solution, a heavy intoxication at once made its appearance; but when the same quantities of the same alcohols were administered simultaneously with the injection respectively of five and eight syringefuls of the strychnine solution, not a slightest sign of any alcoholic poison could be observed. The same may be said in regard to the last week of the dog's life, when the animal was taking daily as many as seventeen ounces of alcohol, and at the same time was receiving twelve syringefuls of the strychnine solution a day. The same could be repeated also in regard to both of the puppies. The results of the *post-mortem* examination in the first group of experiments strikingly differed from those in the second. In those animals which had taken alcohol alone, there were present an intense congestion and cedema of the meninges and brain, flattening of cerebral convolutions, slight dropsy of cerebral ventricles. Meanwhile, in the two killed dogs there was detected (microscopically) nothing abnormal, beyond a slight anæmia of the cerebral substance, as well as of the kidneys and gastro-intestinal mucous membrane. Only in the fatal case of this group there were found slight hyperæmia and cedema of the brain and its membranes, and gray hepatisation of a pulmonary lobe.

In his second paper Dr. Iaroshevsky says that he has carried out two additional experiments for elucidating the action of strychnine in acute alcoholism. He took two healthy young dogs, weighing sixteen pounds each, and gave one of them three and a half ounces of a 62 per cent. alcohol in the course of about ten minutes. After the first ounce a typical intoxication, and after two and a half ounces an extreme prostration, appeared; after another ounce the animal immediately expired. At the *post-mortem* examination, there was found intense hyperæmia of almost all organs of the body, but especially of the brain and its membranes, the cerebral substance being studded with numberless punctiform hæmorrhages. To the other dog the author administered, by portions, nine and a half ounces of the same alcohol and eight syringefuls of the strychnine solution, all in the course of twenty minutes. The first signs of intoxication (slight unsteadiness and weakness of the hind legs) made their appearance only after the ingestion of full five ounces; after eight ounces had been taken, prostration developed, the animal dying two and a half hours since the beginning of the experiment. The necropsy revealed the presence of a compara-

tively slight hyperæmia of all organs, and slight œdema of the brain and its meninges; punctiform extravasations were almost absent. The remaining part of the paper is devoted to a detailed description of the results which were given by the microscopical examination of various organs in all the dogs experimented upon. The following table allows the reader to make an instructive comparison between the two groups:

ALCOHOL ALONE.

(One Experiment.)

Brain and its Membranes.—Intense capillary hyperæmia, with extravasations. Swelling and fine granularity of nerve-cells. Their nuclei are shrunken, fringed, granular, take in dyes but slightly, or do not take at all.

Liver.—Capillary congestion. Hepatic cells swollen; some are opaque, some granular. Lobuli indistinct. Biliary ducts narrowed.

Kidneys.—Congestion opaque. Swelling of the epithelium.

Heart.—Normal.

ALCOHOL AND STRYCHNINE.

I.—ACUTE POISONING.

(One Experiment.)

Brain.—Capillary hyperæmia comparatively slight. Extravasations nearly absent. Nerve-cells and their nuclei normal.

Liver.—Congestion. Hepatic cells normal.

Kidneys.—Some congestion. The epithelium normal.

Heart.—Normal.

II.—SUB-ACUTE POISONING.

(Three Experiments.)

Brain.—Dilatation of peri-vascular spaces, with leucocytes accumulated in diverticula. Incipient hyaline degeneration of vascular walls. Nerve-cells: intense granularity of the protoplasm; generally, the same phenomena as in an acute form, but in a much more pronounced degree.

Liver.—Hepatic cells somewhat shrunken, dark granular; others opaque and swollen. Between them there are seen foreign elements, in the shape of opaque, spheric, and oblong bodies.

Kidneys.—Epithelium opaque, swollen, granular. Tubular lumina narrowed or obliterated. Malpighian bodies separated from Bowmanian capsule by exudation or a vacuole. Their capsules thickened.

Heart.—Normal.

(Two Experiments.)

Brain.—Nothing abnormal, except a slight opaque granularity of some nerve-cells.

Liver.—No congestion. Nothing abnormal, beyond a few opaque, granular hepatic cells.

Kidneys.—Epithelium normal. Malpighian bodies present some morbid changes resembling those met in pure alcoholic cases, but in a by far slighter degree.

Heart.—Normal.

ALCOHOL AND STRYCHNINE. III.—CHRONIC POISONING.

(One Experiment.)

Brain.—Nerve-cells opaque, occasionally with slight granularity. Some nuclei, slightly granular, somewhat shrunken, take in dyes but very badly. The wall of capillaries opaque, pale, closely adherent to the adjoining cerebral tissue.

Liver.—Some hepatic cells are shrunken, and separated one from another by small heaps of leucocytes. Some cells contain fatty granules.

Kidneys.—Tubular epithelium somewhat swollen, granular. The membrane of urinary tubules is thickened. Malpighian bodies sometimes shrunken, and surrounded with leucocytes.

In other words, the cerebral nervous system, which undergoes very pronounced morbid changes under the influence of alcohol alone, remains almost intact when strychnine is simultaneously used. As regards the liver and kidney, the antagonistic action of the alkaloid seems to be comparatively less powerful; however, it somewhat fails only in chronic alcoholism, and even here it unmistakably retards or inhibits the development of morbid changes (cirrhosis). The general conclusions drawn by Dr. Iaroshevsky from his researches are these:—
1. Strychnine most decidedly enables the animal organism to receive large quantities of alcohol for a prolonged period, without any apparent injury to the central nervous system. 2. Strychnine can be recommended in all forms of alcoholism. 3. The best results, however, may be expected in the so-called neuropathic or nervous variety of alcoholic intoxication. The drug will prove, probably, less successful in simple chronic alcoholism with classical hepatic cirrhosis.

[Since the literature on the use of strychnine in alcoholism seems to rapidly grow into something like a prominent chapter in therapeutics, it might prove of service for a future historian of medical science if we chronicle on these pages the fact that it was Dr. Iaroshevsky, and not Dr. N. M. Popoff, who first in Russia (in August, 1885) began to treat dipsomania by strychnine, and that with brilliant results. According to Dr. Iaroshevsky's statement in the *Meditsinskoi Obozrenië*, No. 4, 1887, p. 334, the first of the two cases published by Dr. Popoff (see the *Provincial Medical Journal*, August, 1887, p. 372) was previously under his care, Dr. Popoff only continuing the method of treatment resorted to by Dr. Iaroshevsky. During a discussion which followed Dr. Iaroshevsky's first communication (*Proceedings of the Second Meeting of Russian Practitioners at Moscow*, vol. 1., sect. vii., p. 10; and *Meditsinskoi Obozrenië*, No. 4, 1887, p. 321), Dr. Zakhar A. Zavadsky, of Kürsk, stated that, according to his personal experience, strychnine was an excellent remedy for dipsomania and acute alcoholism (see a paper of his in the *Provincial Medical Journal*, August, 1887, p. 372), but it proved of little use in chronic varieties. He never saw any improvement in organic lesions (cirrhosis, etc.) in chronic patients

treated by the alkaloid. Dr. Stanislav I. Tchirvinsky, of Moscow, thought that an antagonistic effect of strychnine in regard to alcohol should be sought in its stimulating action on the medulla oblongata and spinal cord (as manifested by rise of blood-pressure, retardation of the pulse, etc.), in a direct opposition to alcohol which possessed a paralyzing action on the centres named. Dr. George A. Carrick, of St. Petersburg, said that Dr. Iaroshevsky's experiments on animals did not yet justify any direct clinical deductions for a therapeutic application in man, since the action of alcohol in man was considerably different from that in lower animals. Professor Victor S. Bogoslovsky, of Moscow, warned against a wide public propaganda of strychnine as an antidote for alcohol; since, on one side, it could lead to a further increase in alcoholic excesses, while, on the other, it could give rise to habitual "strychnophagia" or "strychninism," analogous to habitual cocaineism, morphinism, opiophagia, etc. Entirely differing from Professor Bogoslovsky, Dr. Zavadsky emphatically expressed his belief that nothing but good (including a rise in human morality) could be expected from an antidotal use of strychnine. He quoted, in support, a recent case of his own, where a hopeless drunkard, cured by the alkaloid, had become an excellent husband and father. In the *London Medical Record*, December, 1887, p. 543, there may be found a strikingly successful case, published by Dr. Berblinger, of Riga. A preliminary note on strychnine in alcoholism, by Dr. Korona, of Tiflis, is reported in the *London Medical Recorder*, March, 1888, p. 16.—*Rep.*]

III.—SELECTIONS FROM SPANISH AND FRENCH MEDICAL JOURNALS.

TRANSLATED BY DR. G. CADOGAN-MASTERMAN.

Rossbach's Chair in the Treatment of Pulmonary Emphysema (*Revista de Ciencias Médicas*, Barcelona).—In pulmonary emphysema, or, as it is popularly misnamed, asthma, the distress of the patient is chiefly felt in the act of expiration. The over-distended cells of the lungs have lost elasticity; the vault of the diaphragm is lowered, and the ribs, in their typical barrel form, act at a mechanical disadvantage; therefore, the residual air is always in excess, and it needs much more than the gentle, natural fall of the thoracic walls to expel the air which in health is expired so imperceptibly. The idea of mechanically helping the sufferer is an old one, and almost instinctive, and has usually been performed by an attendant pressing with his hands the sides of the chest as the patient out-breathed. Gerhardt seems to have been the first who reduced this idea to a system, and trained nurses in the art of rhythmically compressing the thorax at the right moment and for as long as it was necessary. And this method, in spite of its obvious imperfection and inconveniences, has given excellent results. Practised twice or thrice a day, for only twenty or thirty respirations each time, at the end of a few weeks there has been noted a considerable augmentation in the vital capacity of the lungs, a diminished rate in breathing, an evident elevation of the diaphragmatic dome, and increase in the area of the heart's dulness. For the hands of an attendant Dr. Feris substituted a thoracic belt, which could be used effectively and with less fatigue, but still with the same defect that the intermission and duration of pressure were not regulated by the patient, but by a possibly inattentive nurse.

Professor Rossbach, of Jena, has devised a chair which satisfies every condition when used by the patient himself, or, by reversing the position of the levers, may be worked by a careful attendant sitting behind and watching the descent of the shoulders as the signal for turning the rollers. The chair is an ordinary wooden one, without arms¹ and with a straight back; the seat is prolonged backwards about three inches, and two horizontal brackets are attached to the top rail correspondingly. These support two upright wooden cylinders nearly three inches (seven centimètres) in diameter and as long as the back of the chair, and placed just outside its outer rail on each side. They revolve on iron pins which pass through the projection of the seat and the brackets respectively. At the bottom of each is attached a lever, or wooden handle, of convenient length for the patient to grasp with his arms extended, and, when drawn forwards parallel to each other, the cylinders make a quarter of a revolution. A broad band of strong webbing passes across the chest of the seated patient, and is attached by eyelet holes to a row of studs on the inner face of the two rollers; therefore, on pulling the handles forward, the thorax is compressed, and to any extent which may be thought necessary. As a matter of detail, the bandage divides in the middle and is fastened in front exactly as is done in ladies' corsets, by a row of studs and steel loops. Provision is, also, made for different sized chests by such simple expedients as several rows of eyelet holes, or buckles attached to iron rods, over which the ends

¹ I find one of the rush-bottomed chairs so commonly used in churches answers capitally.—G. F. C.-M.

of the belt are sewn. This belt is a foot in breadth, and is kept in place by two bands passing over the shoulders and buckled to the top rail of the chair. It may be most conveniently made in three pieces for more ready adjustment to the varying conoidal form of patients' chests.

The apparatus is used as follows: The patient seats himself well back in the chair, the levers are drawn outward, and the belt is comfortably adjusted so as to press equally over the thorax, and is fastened to the rollers on either side. Then, extending his arms, he grasps the handles, takes a deep breath, and, as expiration commences, pulls them slowly forward; that act completed, he pushes them somewhat quickly to their first position, takes another deep breath, pulls them gently together again as far as he finds necessary, and so on *da capo*.

It will be at once seen that in this way the movements of the arms coincide with and assist those of respiration; throwing them back helps in filling the chest, and in pulling the levers forward the *pectorales* are relaxed and the ribs depressed at the same moment. We have, in fact, artificial respiration with an automatic operator. The movements are timed and persisted in as long as the physician may have directed—fifteen times per minute, and for ten minutes three times a day, is generally prescribed. The advantages of this apparatus are, that it equally compresses the whole of the chest; that the patient can use it, when once adjusted, alone either by day or by night; that any village carpenter can make it, and that its cheapness places it within the reach of all. The following cases will illustrate its usefulness:

N. L., æt. fifty-six years, a workman in the Arsenal of St. Petersburg, was twenty years in the army, but since 1875 has been working as a labourer, chiefly in moving and carrying very heavy weights. About eight years ago he began to suffer from cough and difficulty in breathing, which disabled him from time to time. In the beginning of October, 1887, he entered the Military Hospital and came under treatment. He is of middle height, muscular, fairly well nourished, radial arteries thickened and incompressible, lips and hands dusky, thorax barrel-shaped, with flattened subclavicular spaces. The movements of the ribs were exceedingly small even during forced inspiration. Auscultation showed general dilatation of the lungs and great encroachment on the cardiac and hepatic regions; there was dry ronchus, and prolonged expiratory murmurs. The circumference of the chest at the nipple line during quiet inspiration was eighty-seven centimètres; forced, ninety centimètres; forced expiration, eighty-six centimètres. He was kept at rest for five days. Pulse was then sixty-five; respiration twenty-four per minute; vital capacity 2,800 to 2,900 c.mm. (the normal should have been, according to Fabius's tables, 3,445 c.mm.). On the 11th of November treatment with Rossbach's chair was commenced, 100 to 200 compressions, at first twice, then three times a day. Before the end of three weeks the patient found himself very much better, and the vital capacity had already advanced to 3,400 c.mm. The expiratory force was eighty mm.; the breathing had fallen to eighteen or twenty times per minute; the liver had receded to its proper site, and the heart's dulness correspondingly increased. He could breathe without difficulty, run easily upstairs to the second floor of the hospital; all œdema had disappeared, and he could work as well as of old. He was discharged cured after six weeks' treatment.

S. S., æt. sixty-six years, porter, like the last had been twenty years in the army, and of intemperate habits. One of his duties had been to carry firewood to the top stories of large houses in St. Petersburg, and under the strain his health had broken down. He has suffered some years from "asthma" and cough. He is described as "a tall man," 170 centimètres (5 ft. 6½ in.) in height, thin but muscular. The lips and hands cyanotic, arteries enlarged and tortuous. Vital capacity 2,300 to 2,400 c.mm. (it ought to have been 3,600); pneumometric force fifty mm. in inspiration, sixty mm. in expiration; chest expansion four c.m. It is unnecessary to give the various chest measurements. On the 12th of November treatment in Rossbach's chair was commenced. At first the patient was exhausted after thirty or forty respirations, but the number was gradually increased to 200 before tiring him. At the end of six weeks there was great improvement in all respects. The chest measurements were much the same, but the vital capacity had increased to 2,850 c.mm., and the expiratory force to eighty or eighty-four mm., and the breathing fallen from thirty-two to twenty-four per minute; and the man could run up a flight of stairs which he could at first ascend only slowly and pantingly.

S. H., æt. fifty-six years, a printer, of steady habits, "medium height, 159 c.m." (5 ft. 2½ in.), and somewhat emaciated. Vital capacity 1,600 to 1,700 c.mm. (normal 2,850); inspiratory energy forty-four mm., and expiratory, fifty mm.; chest expansion, four c.m.; rate, thirty to twenty-eight; pulse, seventy per minute. The liver, as in the preceding cases, was depressed below the thoracic margin. After a month's treatment the vital capacity has increased to 2,000 c.mm., expiratory energy to 60-62 mm., chest expansion to five c.m., whilst the respiratory rate had fallen to twenty-four per minute and the liver had receded within the ribs.

The preceding cases are sufficient to show the value of this machine in the treatment of a very distressing complaint, which is common amongst the labouring and especially the intemperate poor, and one which can be used simultaneously with other forms of physiological treatment—such as in Waldenburg's cabinet—or conjoined with the use of expectorants and cardiac tonics.—(*Vrach.* 1888. No. 3.)

Episodes in Medical Life—A Consultation (*Journal de Médecine de Paris*).—"I was attending, some twenty years ago, the only son of a rich manufacturer, a lad of about sixteen or seventeen years, for a slight laryngeal affection. In all other respects he enjoyed excellent health, and it was clear enough that the throat trouble was purely local; nevertheless, it was one bitter drop in the overflowing cup of happiness in the family circle. His parents were always dreading that it would end in bronchitis or a decline. The slightest cough, the least ronchus, raised the grim and terrible spectre of phthisis, and the lad was to die incontinently. I used to examine his chest with the most anxious and minute care, but could discover nothing to justify any fear or even doubt of the correctness of my diagnosis; but, in spite of balsamics and sedatives, the slightest exposure to cold would cause a little hoarseness, a transitory cough, often without any reason whatever except, it seemed to me, the excessive precautions taken to avert it. The rooms were always too hot, the lad was overclothed—could not stir without a respirator or voluminous wrappers; but when I ventured to hint at this the invariable reply was, "Ah! doctor, if we did not take all these precautions how long would he be with us—the dear child is so delicate?" And nothing I could say would alter their opinion.

One day, when they had been worrying themselves more than usual about the young fellow, the mother, whilst walking with me to the door, said: "Doctor, you know we have the utmost confidence in you; we carry out your instructions to the letter; but our dear child—" "Yes, madam; only you will wrap him up in too much cotton wool." "Well, perhaps you are right; but we are so very anxious—he is our only son. Now, would you mind our asking for the opinion of some famous specialist?" "Nothing would be easier or better. Pray, whom would you like, and when shall we see him?" She mentioned a name well-known in Paris; certainly not of one I should have chosen, for his fame was more social than professional. However, there was no reason why I should decline to meet him, and the interview was arranged. The great man arrived, and was introduced to the patient. "What!" cried he, in theatrical tones, "Is it that fine lad we are to consult about? That superb fellow, in such perfect condition? Come! confess, madame, that you are only making fun of us!" "Well, I admit appearances are in his favour, and I hope his condition is not serious; but he is always losing his voice—always coughing—and if we were not to take care—" and a flood of tears drowned the rest of the sentence. "But, my dear lady, why distress yourself? All may be well. Let me hear from my *confrère* the symptoms." I gave them in a few words. "Well, well, there seems to be nothing serious; but we must examine the chest with the utmost exactness to decide that." "Pardon me," interrupts mamma, "but will you allow me to remain in the room?" "Of course, madame; you have a sacred right to remain: Pray, sit down." And then he begged me to commence the examination. I percussed with minute carefulness every part of the thorax, and, as before, could really find nothing abnormal. "There, you perceive that I have tested with exactness, and the resonance is everywhere perfect." I said this as a matter of form, for I had noticed that the doctor had not paid the slightest attention to my proceedings, but was talking in low tones to the mother the whole of the time. "Ah, well, now it is my turn," said he, and with impressive care placed the lad in position; not, as I had, with the arms crossed on the chest, but stiffly extended. In place of telling him to count "thirteen to sixteen" he gave him a book and directed him to read a dozen lines, and then to sing the gamut, an octave and a half. The mother was watching all this with admiring eyes, and devouring every detail. "Ah! humph!" said the oracle, "it seems there is something—but most difficult to differentiate. Let us hear what percussion yields." And his style was enchanting. Every tap with the fingers was given with a flourish and a graceful sweep as if he were doing the three-card-trick at a fair. There was a moment of indecision and then, with a covert smile, turning towards me he murmured: "There it is; listen, my dear young friend," as he beat his digital drum, now on this side, then on that, "Tick-tock, tick-tock—now, do you not hear it? There is a very appreciable difference in resonance. When I say 'an appreciable difference' I do not say an enormous one—no—but there it is!" "For my own part, my dear sir, I cannot detect the slightest difference." "Oh, very likely, but there it is. But now, come, let me convince you: I will turn my back to the patient, and you shall percuss, and I will tell which side you are tapping upon. You must really do me this favour." He turned round, and I percussed as equally as possible the two sides. "You are on the left side." He was quite right! In a moment, however, my surprise was

changed to admiration. The trick was obvious enough, but done so neatly, with such perfect aplomb that I was duped even whilst taking part in it. He had turned his back to us, but was looking into a large mirror above the console which faced him!

I said nothing; indeed, the tables had been turned so cleverly that I had nothing to say. "Madame, I must not alarm you," he observed, impressively, "these delicate gradations in tone can only be heard after immense practice, only by those who examine a stream of patients—but there is something on the left side of your son's chest—nothing serious,—so little indeed that even my young friend here could not detect it; but there it is. And, now, permit us to consult together as to the treatment."

When we were alone I again expressed my incredulity. "Tut, tut! my dear young friend, you have not yet grasped the situation. Now, here you have a lad who coughs, and has been hoarse for a long time—then how the deuce can you get over that fact by telling the parents that there is no cause for it! Very likely there is nothing the matter with him; but, why does he cough?" "That was exactly what his mother said to me." "There you are—and mamma was quite right—there must be some cause for it. We may not be able to lay our finger upon it, for we must examine and understand our patients thoroughly very often before we can make out their ailments; and then one finds it, because, you see, we are expected to discover it." "But, suppose there really is nothing." "Nonsense, there always is—but even if there were not—we are equally bound to find it; for if you tell these anxious people, 'I can find nothing wrong,' they simply put that down to your ignorance, and send for somebody else, who has knowledge enough of human nature or sufficient *savoir faire* not to be embarrassed by so trifling a difficulty. Now, do you see my meaning?" "Theoretically there is nothing, practically there is." "If you like to put it so; but I assured you that there is—and there really is—a little difference in resonance. The mamma heard the remark; she has not the remotest idea what it means, but she is perfectly happy now that the cause of her darling's cough has been discovered, because she thinks, the cause being known the cure must follow; and the more unintelligible the explanation, the more convinced is she of its correctness. One may cure, you know, a difference in resonance, but how can you pretend to cure a person whom you declare has nothing the matter with him?" I began to understand. "Now I admit this is not science—" "Nor what we were taught in the schools." "By Jove, I should think not; but it is a good working rule—smelling a little perhaps of the shop and the lawyer's tape—but if our patients are satisfied, nay! made happy, what does that matter? What is the art of the dramatist in his most thrilling situations but a trick; the skill of the author, a trick of his brain; of the artist in creating his *chefs d'œuvre*, a trick with the paint brush?" "Well," a little sadly, "I daresay you are right." "Of course I am. I am a cynic, but I succeed. I have had the honour to be asked to meet you to-day—and now for treatment."

A little delicate counter-irritation, a trace of arsenic in syrup of orange peel, sufficed.

As I accompanied this truly great man to the door, he smilingly observed, waving my compliments away, "You are too modest, my ingenious young friend; you have already the science of medicine at your finger ends—why not acquire the art also? Adieu."

"MORAL."?—Oh, well, one always learns something at a consultation!

IV.—OBSTETRICS AND DISEASES OF WOMEN.

Uterine Moles. By Edward Rosenthal, M.D. (*Journal of the American Medical Association*, March 3, 1888, Chicago).—Obstetricians divide moles into two great classes: *a*, the false; *b*, the true moles. True moles are subdivided, as regards their physical character, into fleshy and vesicular or hydatidiform. The fleshy are again divided into fatty, carneous (steinmole); etc. Moles have been designated by different names: moon-calf (Mondkalb); devil's blood (Teufelsbrut); wind-egg (Windei); sun child (Sonnenkind); Neirenkind, Kielpopf, Missgeburt, etc. By the profession they are designated by their contents: blood mole (Blutmolen); water mole (Wassermolen); air moles (Luftmolen); hair mole (Haarmolen); cartilaginous mole (Fleichenmolen); bone mole (Knochenmolen); and calcareous mole (Kalkmolen).

a. Spurious Moles.—Mauriceau believes that moles could not exist without impregnation; that it was always the offspring of intercourse. In his 105th aphorism (*Traité des Maladies des Femmes Grosses*) he says: "Les femmes n'engendrent jamais des moles, si elles n'ont usé du coït." This Alexander Milne, of Edinburgh, cannot subscribe to, believing that cases occur; nay, more, having met with them, where fleshy masses have been expelled from the uteri of women who certainly never had connection. If virgins expel such things, then, they are not to be impeached; to do so would be unjust. Various substances, organized or unorganized, may be discharged from the uterus of the virgin; such substances as clots of blood, membranous shreds, or even whole

membranes, as well as fibrinous materials. These may even have the shape of the uterine cavity, and may come away naturally or must be removed; and which have nothing whatever to do with fecundation, and are termed spurious moles. Their significance is of some importance from a medico-legal view, and the utmost care should be exercised in differentiating these false moles from true ones. Difficulty may arise when the discharged tissue is the membranes of membranous dysmenorrhœa, where this tissue may be mistaken for true decidua membranes. The circumstances attending each case should receive the earnest scrutiny of the attending physician. All circumstantial and direct evidence should be gathered: were there any previous attacks? note the absence of the signs or symptoms of pregnancy, and so on. Examine the discharged mass; should this happen to be complete, we may find the opening of the Fallopian tubes and that of the cervix, which is never observed in true decidua. The microscope, however, will determine the presence or absence of the fecundated ovum. Blood clots, polypi, and small fibroids or portions of large ones should not be difficult of recognition by naked eye or microscopic examination.

b. True Moles.—True moles are always the result of impregnation. The villi of the chorion may become distended with fluid collecting within them, causing them to swell and assume the form of rounded vesicles comparable to gooseberries or grapes, resembling hydatid vesicles, and on account of this analogy they were for a long time supposed to be true hydatids. Or an extravasation of blood may take place between the maternal and foetal structure of the fecundated ovum or into the tissue of the latter, producing a fleshy mole. The embryo may become mummified, or may speedily disappear in the early stages, and then we meet only with the membranes or appendages. Two chief varieties of true moles are at present recognised, namely: 1, the fleshy; and 2, the vesicular or hydatidiform mole.

Etiology.—Extravasation of blood between the maternal and foetal structures of the fecundated ovum, or into the tissues of the latter appears to be the active agent in the production of the fleshy mole, which is the most frequent form.

Symptoms.—The immediate symptoms are those of a threatening miscarriage. Absence of the placental soufflet and of the positive signs of pregnancy are among the signs.

Course.—The course of the molar pregnancy of the fleshy variety is variable. Generally at three months, nature seeks to throw off the mass. Hæmorrhage comes on about this period, and then it is simply a question of time when the uterus expels its contents.

Diagnosis.—The diagnosis of the fleshy mole I should deem impossible. Suspicion may arise when the patient has had one before, but as regards positiveness, I think it out of question. It can only be made when you have the tumour in your hand.

Prognosis.—All the cases here quoted ended favourably. Prompt treatment should be the rule. Should danger arise from the excessive hæmorrhage, the tampon is always a safe and efficient remedy. Some cases of extra-uterine moles which authorities quote, that have been met with in the ovary and abdomen, and the cyst given way, causing death, are of course unfavourable. Sometimes these cysts have opened into the bladder or bowels; the result being the same. Still, the same chances which extra-uterine pregnancies have in antiseptic surgery extra-uterine moles may have; and the prognosis modified. These cases are, happily, most rare. Wilton (*Lancet*, February, 1840) relates one case. Peritonitis may result from the misuse of instruments, causing death. Hæmorrhage might, and pyæmia and septicæmia, etc., may cause death.

Pathology.—The pathology of fleshy moles is still shrouded in obscurity. Heart disease, causing an effusion of blood; again, syphilis and other blood dyscrasie, appear to exert an influence, and perhaps the same may be said of acute specific diseases where they fail to excite abortion. Whatever may be the exciting cause, when once blood has been effused into or between the foetal and maternal structures, the vitality of the embryo is speedily compromised. The common result is abortion; but, should not the whole be thrown off, growth may take place in the remaining tissue; while the effused blood becomes organized and gives bulk to the mole. In a case of cancer of the ovary, posted by a friend, I removed some time previous what I termed a retained placenta, which was in the uterus of the unfortunate woman five months. The maternal placenta is formed by the decidua serotina. The foetal placenta is formed by the villi of the chorion, which, having originally covered the entire surface of the ovum, atrophy over the major part of surface, while they ramify and develop, *ad infinitum*, at the point corresponding to the serotina, where they become imbedded and constitute the vascular mass known as the placenta. To study changes in the chorion amounts to studying the lesions of the placenta, and the reverse. Now, these changes may relate to each of the placental elements, *i. e.*, the vessels and the villi. Not infrequently a considerable effusion of blood takes place immediately beneath the amnion encroaching greatly upon and sometimes rupturing the amniotic sac, and Cazeau (1876, page 578) gives his description of a fleshy mole as follows: "It

may further happen that the placenta, maintaining its vascular adhesion with the internal surface of the organ, continues to develop after the child's death, the cord and fœtus becoming atrophied, and then completely destroyed; or, indeed, the ovum may rupture, and the little product escape, leaving the membranes behind. These envelopes may undergo various modifications, but the most common is the morbid product known as a fleshy mole." The inner aspect of the cavity then presents an irregular nodular appearance, and is of deep red, almost black colour. When the nodules are incised they are seen to be composed of firm blood clot. The fetal surface contains numerous blood cysts.

Vesicular Mole.—The vesicular, hydatid or hydatidiform mole is the better understood, if not the more important variety of the true mole, and has received the most attention of the pathologist. I have seen it but three times, twice in one person. I will relate the cases here. We are still not assured whether the cause of the variety is primarily in the ovum, or in the diseased decidua. The cause may lie with the mother; Virchow attributes it to endometritis.

The symptoms are those of ordinary pregnancy. There is, however, a tendency to watery and sanguineous discharges, and sometimes small vesicles come away, when the diagnosis is clear.

Pathology.—The name "hydatid" mole is erroneous and misleading. There are no true hydatids or echinococci in it; the physical arrangement of the vesicles is different. True hydatids are closed sacs, contained one within another, while the vesicular mole is formed by sacculi growing from one another. It was formerly supposed that they grew from a common stalk, and they were likened to a bunch of grapes or currants; but for the reason given above the simile was imperfect. The vesicles vary in size from a chestnut to a pin's head or less; usually they are about the size of small currants, and as a few may from time to time escape accompanied by more or less sanguineous discharge, Gooch's simile of "white currants floating in red currant juice," is a very apt one. Dubois and Desormeaux describe three varieties of hydatidiform moles. 1. The embryonal hydatid mole. 2. The hollow hydatid mole. 3. The hydatid mole *en masse*. The first variety consisting of a membrane, vesicular on its outer surface, with an internal cavity containing a fœtus or parts of one, and possible fluid. The second kind is like the first, save that its cavity contains only fluid, and possibly a remnant of the umbilical cord, the fœtus having been dissolved. The third variety is distinguished by the enormous development of the hydatid bodies, and the more or less complete effacement of the central cavity formed by the amnion, the place of which is taken by a mass of soft, yellowish, spongy tissue.

The authorities agree that vesicles grow from the chorionic villi. There is no new formation, but excessive and erratic development, Mettenheimer, Paget, Barnes, Virchow and others, concur in this view. Whether the change is the cause or the consequence of the death of the embryo is unsettled. It may be some innate morbid condition of the ovum, or some acquired defect. Dr. Hewitt thinks that the starting point of the abnormality is the death of the fœtus rather than this latter is the result of the degeneration. Leishman points out that the period within which degeneration of the chorion villi may originate does not extend probably beyond the tenth week, that being the period of greatest activity in the growth and multiplication of the villi. Later on when blood vessels have occupied the bulk of the villi this kind of degeneration seems capable of formation. The probabilities therefore are in favour of the formation taking place in the first chorion or vitelline membrane. Normally, only those villi that correspond to the placenta develop progressively; but if a pathological condition supervenes very early in pregnancy, they are proliferate and become hyperplastic. Abortion usually follows, but it may happen that the placenta develops normally, only a certain group of villi becoming hydatid. Usually, however, the affection is situated just at the placental site, though only a portion of the cotyledons may be affected. In any case the affection begins as a multiplication of nuclei and cells. The theories concerning the vesicular mole may be summed up as Duchamp says, in the following propositions: 1. The vesicular mole is entirely independent of pregnancy. 2. The vesicular mole increases under the influence of pregnancy, but it is not due to a disease of the egg. 3. The vesicular mole is due to a change in the product of conception, from *a.* alteration of the vascular wall (Cruveilhier); *b.* alteration of the lymphatic vessels; *c.* dropsy of the chorinal villi (Robin, Cayla); *d.* Myxomatous degeneration (Virchow and the Germans, Ercolani, Damaschino, Cornil, Ranvier, Hirtzmann, 1874, Josephson, 1879). Of these the theory of Virchow is the accepted one, for the following reasons: 1. The normal villus contains mucoid tissue; it is not astonishing that it should hypertrophy. 2. The vesicular fluid contains mucin. According to Gscheidlen, it is composed of chloride of sodium, 3.34, phosphoric acid, 0.74, albumin, 6.12, mucin, 2.94, salts, 6.25.

V.—OPHTHALMOLOGY.

The Dangers of Simple Extraction of Cataract.—Derby, of Boston, in the *Boston Medical and Surgical Journal* of February 28, 1888, calls attention to the dangers of cataract operations, as follows: The question as to what operation should be performed in an ordinary case of senile cataract is once more a prominent subject of discussion. At the late meeting at Heidelberg, as well as at the one held at New London, this matter engrossed much attention. More recently, Professor Schweigger, of Berlin, has published in Knapp's *Archives* an article on the return to the flap operation, in which the performance of iridectomy, the "needless maiming of the iris," as the author expresses it, is strongly denounced. The question at present under discussion is, therefore, the following: Do the modern discoveries of a reliable myotic, of an efficient local anæsthetic, and the adoption of antiseptics, justify a return to the principle of extracting senile cataract without the performance of iridectomy? May not the operation, however, be restricted to certain cases? and are there not certain special rules to govern the after-treatment? The writer has laid down the following principles for his own guidance: 1. He would reserve simple extraction for those cases in which the cataract is ripe, the nucleus large, the patient tranquil and amenable to discipline. 2. After the operation, the application of the bandage should be slightly delayed, the object being to ascertain whether the iris, once replaced, shows any tendency again to prolapse. If it does so, it is to be at once excised. 3. Eserine is to be applied directly to the eye immediately after the operation, and dropped in the inner corner of the eye, without separating the lids (as recommended by Schweigger) for the three following days. 4. Greater quiet on the part of the patient is to be insisted on than has been the case after the operation of Gräfe. 5. The eye needs to be inspected much sooner, certainly by the end of the third day. And even if these or similar rules be followed, Derby cannot resist the belief that for the average surgeon, and in the present state of our knowledge, simple extraction at the best involves an element of danger that is wanting in the method of Gräfe. The successful extraction without iridectomy is unquestionably the more brilliant of the two methods, and the patient thus cured a more striking exemplification of surgical skill. A greater familiarity with the new operation may cause the risk to assume inconsiderable proportions. But some risk is likely always to remain. It is like the old question as to the relative advantages of ether and chloroform: the latter easier to transport, pleasanter to take, quicker in its effect, and occasionally alarming in its consequences.

The Spirit of the Societies.

SOUTH AUSTRALIAN BRANCH OF THE BRITISH MEDICAL ASSOCIATION, January 26th, 1888. Total Extirpation of Larynx.—DR. GARNER read the notes of a successful case of total extirpation of the larynx, performed by him for cancer. He also showed a vulcanite artificial larynx, made by Dr. Woodburn, especially for him, at Dr. Newman's request. It had been modelled after Foulis' original instrument. The ordinary silver instrument looked alarmingly big and heavy in comparison.

DR. DAVIES THOMAS raised the point as to whether the operation could be called a justifiable one. Personally he knew nothing about the matter, but he thought it was a matter of importance to the profession to consider the ground on which it would be judged by the outside public. He thought that as regards English surgeons there was a consensus of opinion against it—a feeling that the average result was not sufficiently good. He would refer to Dr. Morell Mackenzie's book on the subject. The great question was did it sufficiently prolong life to make it worth while running the great risks incurred. That should be the basis on which it should be judged. As an example he would refer to Keith's remarks on the justifiability of operating for fibromata of the uterus. Just before leaving London, two years ago, his friend, Dr. Felix Semon, had a German surgeon to operate on Mr. Montague Williams, removing a portion of the larynx. At the same time Dr. Semon had strongly expressed his opinion that as a rule he did not consider the operation a justifiable one. Dr. Thomas regretted that he did not remember what had been the circumstances making it justifiable in Mr. Williams' case.

DR. GARDNER, in reply, said that nothing would have pleased him better than to have been able to answer Mr. Hayward's queries. He said that was just what they had yet to find out. He did not set himself up as an authority on the operation, as he did not consider that he had had yet sufficient special experience. Taking all the cases on record, they did not yet exceed one hundred. Hahn, of Berlin, had operated upon fifteen cases, nine in which the larynx was partially removed, and six in

which there was total extirpation. One of these latter had made a complete recovery, and had survived the operation, as yet, seven years. If, therefore, even one in fifteen had no recurrence of the disease, surely that was enough to justify the operation. In judging of the opinion of English surgeons, great stress must be laid on the miserable, foggy, damp climate of England. In Great Britain there had only been as yet two successful cases of complete laryngotomy, all the others had been failures. And these two cases had been operated on in Scotland. It was very natural, therefore, that there should be felt a certain amount of disinclination on the part of English surgeons to attempt it. He thought the profession was not yet in a position to decide either for or against it. What he would recommend was, that surgeons should go on working, and, after a time, the necessary data would be forthcoming. As regards the operation itself there was nothing very formidable about it, if only the operator had familiarised himself with it before-hand, by operating on the cadaver. He must acknowledge that his first case was rather disappointing in its results; but then it was a very unfavourable subject, as the disease had already lasted two years. If the prolongation of life should be found to be only ten months duration, the operation would certainly not be justifiable. He hoped however, for better things.

[*Statistics.*—The *British Medical Journal*, April 7th, 1888, gives the following: "The disastrous results of several cases in which similar operations have recently been performed seem to have opened men's eyes to the magnitude of the risk to which the Imperial patient would have been exposed but for the intervention of the English physician, in whom he not unnaturally places such confidence. Thus, our Berlin correspondent, who is in a position to know facts, informs us that Herr Kayser, a prominent member of the Social Democratic party in the German Reichstag, died a few days ago, immediately after half of his larynx had been cut out, by Professor Von Bergmann, for cancer. We are also informed that all the eleven other patients on whom that distinguished surgeon has performed this severe operation have since died. Dr. Eugen Hahn, who has hitherto been the most successful operator in that line, has been equally unfortunate in his last two cases. Only the other day an operation of the same kind, performed by a leading London surgeon, resulted in the death of the patient on the third day. In private one hears of many cases which have not yet come publicly before the profession."]

MIDLAND MEDICAL SOCIETY, March 27th, 1888. **Acute Peritonitis treated by Abdominal Section.**—Mr. LAWSON TAIT read a paper on a series of cases of acute peritonitis treated by abdominal section. The cases supported the growing opinion that acute peritonitis is usually of local origin, and also that if operation is to be done successfully it must be performed early. One case illustrates the danger of puncturing through the rectum, ovarian cysts obstructing descent of the foetal head. Mr. Tait said that suppuration always followed such methods of puncture. He quoted a case to show that gonorrhœa, acquired before or during pregnancy, might give rise to acute peritonitis, and gave it as his opinion that such condition frequently occurred. Another case where acute peritonitis had resulted from the suppuration and bursting of a hydatid cyst, and which was treated successfully by abdominal incision and drainage. Another case, where peritonitis had followed gall-stone colic, also treated successfully. Another, where no local cause could be found; and another where tubal disease had given rise to the peritonitis. He had operated on eight acute cases during the past seven months, with six recoveries. One death was due to delay in operating, and the other occurred in a primiparous woman—a class who are not only more liable to this disease, but in whom also it runs a more rapid and a more fatal course. The abdomen should be opened through a small incision between the pubes and the umbilicus; any local cause which can be found should be dealt with. The cavity should be thoroughly washed out with plain warm water, and drained until free exudation has ceased.—There was a good discussion, in which Drs. Bennett, May, Macan (Dublin), Lloyd, Johnston, Taylor, and Donovan took part.

Medical Miscellanea.

THE subject of our next illustration will be Hugh Owen Thomas, Esq., Liverpool.

Contagious pneumonia, swine plague, or hog cholera has been very prevalent in the neighbourhood of Marseilles; 30,000 hogs have died.

Sir Prescott Hewett and Sir Thomas Longmore have been elected foreign associates of the Academy of Medicine, Paris.

The next International Congress of Chemists and Pharmacists will take place at Milan next September.

There are 102 lady students attending courses of medicine in Switzerland.

Mr. Robert W. Doyne has devised a new Stereoscope for the purpose of thoroughly carrying out orthoptic training of the eyes.

The Academy of Medicine, Paris, has pronounced unfavourably on M. Luy's experiments on hypnotic subjects.

Sir James Paget will preside, on May 2nd, at the dinner of the Royal Literary Fund.

We have received the first number of the "Nursing Record," a journal for nurses and chronicle of hospital news. We wish the new venture all success.

The Seventeenth Session of the French Association for the Advancement of Science took place at Oran, commencing 29th March. Medicine forms a very important section in this association.

An Otological Congress will be held at Bruxelles from 10th to 15th September. Dr. C. Garis, Rue Royale, 143, Bruxelles, will receive all announcements and give any information.

Dr. William Sinclair, M.A., M.D., C.M., Hon. Physician to the Manchester Southern Hospital for Diseases of Women and Children, has been appointed Professor of Midwifery to the Owen's College in the place of Dr. Cullingworth.

We regret to announce the death of William Alexander, M.D., F.R.C.P. Lond., on April 13th, at the age of eighty-two years. His family have been settled in Halifax for a century and a half, and he had been in practice in Halifax for nearly half a century. He was connected with most of the local institutions, besides being a J.P. for the county.

If M. Gautier's observations be correct, the bodies of all dogs destroyed from, or on suspicion of rabies, should be cremated. M. Gautier states that the medulla of a dog dead from rabies, removed seventeen days after death, then buried in the earth for fifteen days longer, preserved all its virulence. Inoculations from it caused rabies in twelve days.

A SCENE FROM LIFE.—Earnest Scotch student with his ear on the stethoscope: "Now, my man, draw a long breath." Patient: "Och, thin, if you don't lane lighter you won't let me draw a breath at all." Remarks afterwards: "Me to draw a long breath, with twelve stone weight on me ribs."

Dr. John M. Browne has been nominated Surgeon-General of the United States Navy. He was Surgeon to the Kearsage during the memorable fight at the Alabama. He was a delegate from the Medical Department of the Navy at the International Medical Congresses of London and Copenhagen.

Correspondence, Notes, and Queries.

Communications, Books, etc., should be addressed directly to the EDITOR, "The Provincial Medical Journal," Horton House, Halifax.

Matters of business should be addressed to the Publisher, at the Offices, 10, Friar Lane, Leicester; or to the London Representative, Mr. E. BELLA, 58, Charing Cross Road, W.C., to whom all communications respecting Advertisements should be addressed.

We cannot undertake to return rejected MSS. unless stamps sufficient for their postage are enclosed.

We shall be glad to receive reports of Medical Vacancies, Appointments, Meetings of Societies, etc.

Papers containing passages for consideration should be marked. Correspondents must please attest their communications with their proper name and address (not necessarily for publication).

Contributions must be written on one side only of the paper.

MSS. intended for publication to be sent in not later than the 16th of the month.

The insertion of any letter in these columns cannot be taken as necessarily indicating our adhesion to the views or statements therein expressed. The same remark applies to articles to which a name or nom-de-plume is attached.

IMPURITY.

To the Editor of "The Provincial Medical Journal."

SIR,—I wish to present some considerations relative to the great question of purity which you have raised in one of your leaders this month. For many years I had medical charge of a district in the centre of Ireland, with an agricultural population of about 3000. Illegitimacy was very rare, and for years I never saw a case of specific disease. I made inquiries as to whether patients so affected could be going any where else, and I found there was no evidence that this took place. I believe that this immunity from specific disease is the rule among the agricultural population in Ireland. In my opinion, this state of things is due to two causes: One is that the people, male and female, have been thoroughly instructed by their religious teachers that impurity is wrong; the other is that the practice of early marriage takes away the temptation to impurity. In England a great number of the people are very little removed from the beasts in their notions of morality; and, in cities especially, the hindrances to marriage are very great. There is truth in the remark I lately read: that both idleness and overwork are fruitful causes of immorality. Both these causes are powerfully at work in England. A majority of the population are working like galley-slaves to keep a minority in idleness. All past history shows that whenever a nation has become, in its aristocracy, idle and dissolute, and in its democracy, drunken, over-worked, and sensual, dissolution is near at hand. The hope of England lies in the enlightenment of its democracy. Instruct and elevate the people, and, along with that, restore to them the land which is rightfully theirs. If this be done speedily, it will stop the rush to the cities. Men will then build houses and live in them, and marry and give in marriage. If this is not done in a legal way, it is very certain that ere long society will be overturned to its foundations.—Yours, etc.,

VOX.

Belfast, April 10th, 1888.

TURKISH BATH IN A PRIVATE HOUSE.

To the Editor of "The Provincial Medical Journal."

DEAR SIR,—I shall feel greatly obliged if any of your readers will let me know if there is any work published, and if so the publisher of it, giving plain directions how to erect and manage a Turkish Bath in connection with a private house.—Faithfully yours, M.D.

April 16th, 1888.

THE "PYRETIC" ACTION OF ANTIPYRIN.

To the Editor of "The Provincial Medical Journal."

SIR,—A microscopic examination of the effects of a solution of antipyrin upon the blood convinced me some time ago that the drug is an antipyretic, solely in virtue of its power in preventing the formation of fibrin. By fluidising the blood it consequently diminishes the resistance to its current, and obviates *stasis*. This relieves tension, and reduces cardiac excitement and action accordingly. The result is a corresponding reduction of temperature. But the same power of preventing *stasis* of the blood may be taken advantage of in treating the *stasis* of syncope. There is stagnation in the capillary system, and laboured action of the heart. Antipyrin, by fluidising the stagnating blood, relieves the heart and re-establishes the blood-current. It is thus a powerful restorative in such cases. It may be given in the form of a draught of fifteen or twenty grains, with ammonia, or brandy, or wine, or by intravenous or hypodermic injection with ether. In the same way it is useful in the congenital debility, with feeble circulation, of infants, given in grain doses, with a little borate of soda, three or four times a day. If these observations have any foundation in fact, a better name for the drug would be *antistasin* or antifibrin. Confirmation or complete refutation of them could easily be furnished by direct experiment upon the lower animals. It would be found that after full doses of the drug the blood of the animal would be devoid of clotting power on being shed. If confirmed, a guide would be furnished for the indications and contra-indications in the prescription of this potent drug. It would be proved that there is grave danger in the giving of it to those who suffer from diseases associated with a diminution of fibrin, such as all septicæmic affections, typhoid conditions, puerperal fevers, *et hoc genus omne*.—I am, Sir, yours faithfully,

April 19th, 1888.

C. R. ILLINGWORTH, M.D., M.R.C.S.

Bibliographical Record.

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- Transactions of the Obstetrical Society of London. Vol. xxix., year 1887. London: Longmans, Green & Co.
- Transactions of the Academy of Medicine in Ireland. Vol. v. Edited by William Thompson, M.A., F.R.C.S. Dublin: Fannin & Co.
- On Gonorrhœal Infection in Women. By William Joseph Sinclair, M.A., M.D. London: H. K. Lewis.
- Second and Third Reports of the New York Cancer Hospital.
- The Lettsomian Lectures—On Some Points in the Surgery of the Urinary Organs. By Reginald Harrison, F.R.C.S. London: J. & A. Churchill.
- Outlines of Qualitative Analysis. By George W. Slatter, A.R.C.S. London; Thomas Murby, 3, Ludgate Circus Buildings.

PERIODICALS RECEIVED.

AMERICAN:—

1. The Journal of the American Medical Association.
2. The Therapeutic Gazette.
3. Medical Register (Philadelphia).
4. New York Medical Journal.
5. Medical Record (New York).
6. The Medical Bulletin (Philadelphia).
7. New England Medical Monthly.
8. Medical Times (Philadelphia).
9. The Polyclinic (Philadelphia).
10. The Analectic.
11. The Medical Standard (Chicago).
12. The St. Louis Medical and Surgical Journal.
13. The Denver Medical Journal.
14. Annals of Gynecology (Boston).
15. The Medical News.
16. The American Lancet.
17. The Medical and Surgical Reporter.
18. The American Druggist.
19. The Western Medical and Surgical Reporter.
20. The South Western Medical Gazette (Louisville).

BRITISH:—

21. The Philanthropist.
22. The Practitioner.
23. The Medical Chronicle.
24. The Medical Press and Circular.
25. The Journal of Microscopy and Natural Science.
26. The Indian Medical Gazette.
27. The Australasian Medical Gazette.
28. The Hospital Gazette.
29. The Journal of Rhinology.
30. The Birmingham Medical Review.
31. The Ophthalmic Review.
32. The Pharmaceutical Journal.
33. Public Opinion.
34. Health.
35. The Chemist and Druggist.
36. The British and Colonial Druggist.
37. The Australasian Journal of Pharmacy.
38. The Journalist.
39. Diet and Hygiene.

FRENCH:—

40. Journal de Medecine de Paris.
41. L'Union Medicale.
42. Le Progrès Medical.
43. Bulletin Général de Thérapeutique.
44. Gazette de Gynecologie.
45. Gazette Hebdomadaire des Sciences Medicales.
46. Journal de L'Ouest.
47. Journal du Nord.
48. L'Electrothérapie, Journal d'electricité.
49. Revue Pratique d'Obstetrique et d'Hygiene de l'Enfance.
50. Annales de Gynecologie et d'Obstetrique.

GERMAN:—

51. Centralblatt für Kinderheilkunde.
52. Centralblatt für Gynecologie.
53. Centralblatt für Chirurgie.
54. Illustrierte Monatschrift der Artzlichen Polytechnik.
55. Der Fortschritt.
56. Fortschritt der Medecin.

ITALIAN:—

57. Lo Sperimentale.
58. Rivista Italiana.
59. Rivista Internazionali di Medicina.

PORTUGUESE:—

60. A Medicina Contemporanea.

RUSSIAN:—

61. Vrach.

SPANISH:—

62. Rivista Clinica de Barcelona.

The above journals have been regularly received. We shall feel obliged if editors of British and foreign journals will notify whether their journals have been sent.

Copies of Index for 1887 may be obtained at office, 10, Friar Lane, Leicester.

THE Provincial Medical Journal:

A MONTHLY REVIEW OF MEDICAL SCIENCE, LITERATURE, AND BIOGRAPHY.

VOL. VII.]

JUNE 1, 1888.

[No. 78.]

Our Portrait Gallery.

HUGH OWEN THOMAS.

It is now a hundred years ago since Park, a Liverpool surgeon, ably advocated excision as an alternative to amputation, and became a pioneer in a crusade which resulted in great benefit to mankind. It is a strange coincidence that the writings of another Liverpool surgeon, Mr. H. O. Thomas, have been mainly instrumental in rendering infrequent an operation which a century back was an unmixed good. And yet at both periods the reforms were needed in the interests of that conservatism which alone merits the name of surgical advance.

The subject of our sketch was born in Anglesea, North Wales, August 23rd, 1834, and having undergone the usual preliminary training of early life, became in 1850 an articled pupil to his uncle, the late Dr. Owen Roberts, of St. Asaph. He always refers in kindly terms to this apprenticeship, and to the advantages he derived from association with so cultured an intellect, and so experienced an instructor. After a sojourn at Edinburgh and London, he was admitted a Member of the Royal College of Surgeons in 1857. He soon afterwards started practice as a general practitioner, and in a short time became encompassed with work. In 1873 he published his first pamphlet, the subject being the treatment of compound fractures of the lower jaw. He advocated with certain reservations drilling the maxillary bone, wiring, and so arranging the twist coil as to readily admit of tightening, or the reverse. Two years later he published the first edition of his volume, entitled "The Treatment of Diseases of the Hip, Knee, and Ankle Joints," which is now so generally known, and in this volume were first figured the splints for the hip and knee, which are called "Thomas's Splints." In the inventor's splint room may be seen models illustrating the slow evolution which these splints have undergone before arriving at their present stage. Mr. Thomas, however, has always looked upon them as very secondary to a correct appreciation of the principles which he lays down as governing

the successful treatment of diseased articulations. Closely following this work there appeared the volume, which he considers his best, entitled "The Treatment of Intestinal Obstruction," wherein he advocated, in contradistinction to the tendencies of the teaching of the time, a reduction of bowel contents. This has been followed by many other volumes, amongst which we may mention that on "Inhibition of the Nerves," which aimed at rationalizing the art of prescribing; "The Collegian of 1666 and the Collegians of 1885;" a polemical brochure justifying the publication of his intestinal work, and extolling the principles advocated by Sydenham when compared with those of modern physicians. Later he has published "The Principles of Treatment of Joint Disease," "The Principles of the Treatment of Fractures and Dislocations," and "Injuries and Diseases of the Trunk and Upper Extremity." Among his minor contributions we may name "Fractures of the Patella," "Fractures of the Neck of the Femur," "A Review of the Past and Present Treatment of Joint Diseases," and only lately in our columns a description of a new Lithotomy operation.

Having started his professional career as a general practitioner, he has never been able to favour specialism, and in every surgical or medical undertaking he is governed by general principles which in certain features are identical. This generalization is only possible when a large and diverse field of work is submitted to observation. If we were to attempt to analyse Mr. Thomas's special aptitudes, we should say they consisted in an original mind not in the least tainted with reverence for authority as authority, whatever its source.

For thirty-one years he has not had a single day's holiday, and when not engaged at literary work he spends his evening with his lathes. Work is his only enjoyment, if we except cigarette smoking, and the text which he has chosen as a motto to one of his pamphlets accurately describes the man. It runs:—"Wherefore I perceive that there is nothing better than that a man should rejoice in his own works; for that is his portion; for who shall bring him to see what shall be after him."

Original Communications.

THE TREATMENT OF UTERINE DISPLACEMENTS.¹

By HENRY R. HATHERLY, M.R.C.S.,

SURGEON TO THE HOSPITAL FOR WOMEN, NOTTINGHAM.

SO MUCH has already been written and said on the subject I propose to introduce for discussion to-night, that it may seem somewhat presumptuous in me to express my own views on that which has already occupied the attention of so many distinguished gynaecologists. My excuse is that there is such a total want of agreement amongst the many authorities who have made known their views, that the whole subject of the treatment of uterine displacements may still be considered *sub judice*. The very variety of pessaries which have been from time to time introduced for the treatment of uterine displacement, most of which are praised by some and condemned by others, is evidence that there is no common ground of agreement, even on the purely mechanical treatment of some of the commonest diseases of women.

I do not propose to waste your time by describing in detail the various kinds of displacement which are described in all text-books, and with which you are as familiar as I am; and, as I fully agree with Mr. Lawson Tait when he asserts, that he can find no more complete and satisfactory account of uterine displacements than that given in the Clinical Lectures of Sir T. Y. Simpson, I shall adhere to his nomenclature. Thus, by version, I mean that the uterus is turned out of its proper axis without being bent; and, by flexion, I mean that the womb is bent with a more or less sharp curvature; by procidentia I mean incomplete descent of the uterus, and by prolapsus complete descent; the difference being one of degree rather than of kind, it is difficult to define where one begins and the other ends, and any distinction must be arbitrary. For practical purposes I should draw the line at the extrusion through the vulva of any portion of the organ.

As the causation of uterine displacement is a very important indication for its rational treatment, I must ask you to bear with me whilst I glance very briefly at some of those conditions which have a tendency to bring about either version, flexion, or procidentia. It is not often that a displacement can be referred to any one cause, but usually several causes contribute to produce the result. Few will doubt the important part that childbirth plays in the production of displacements, yet childbirth is a natural physiological process, and ought not under normal conditions to be followed by any evil consequences. Displacements due to childbirth alone may usually be prevented, and are perhaps the most readily curable. But how often do we find normal conditions wanting in the pregnant woman? We shall find, in addition to the accidental cause of parturition, one or many amongst the following predisposing or contributory causes—viz., enfeebled general health with a relaxed muscular fibre, the bad habit so many women acquire of habitual constipation, retention of urine for prolonged periods, insufficient rest in horizontal posture, lifting or straining too soon after confinement, especially where there is deferred

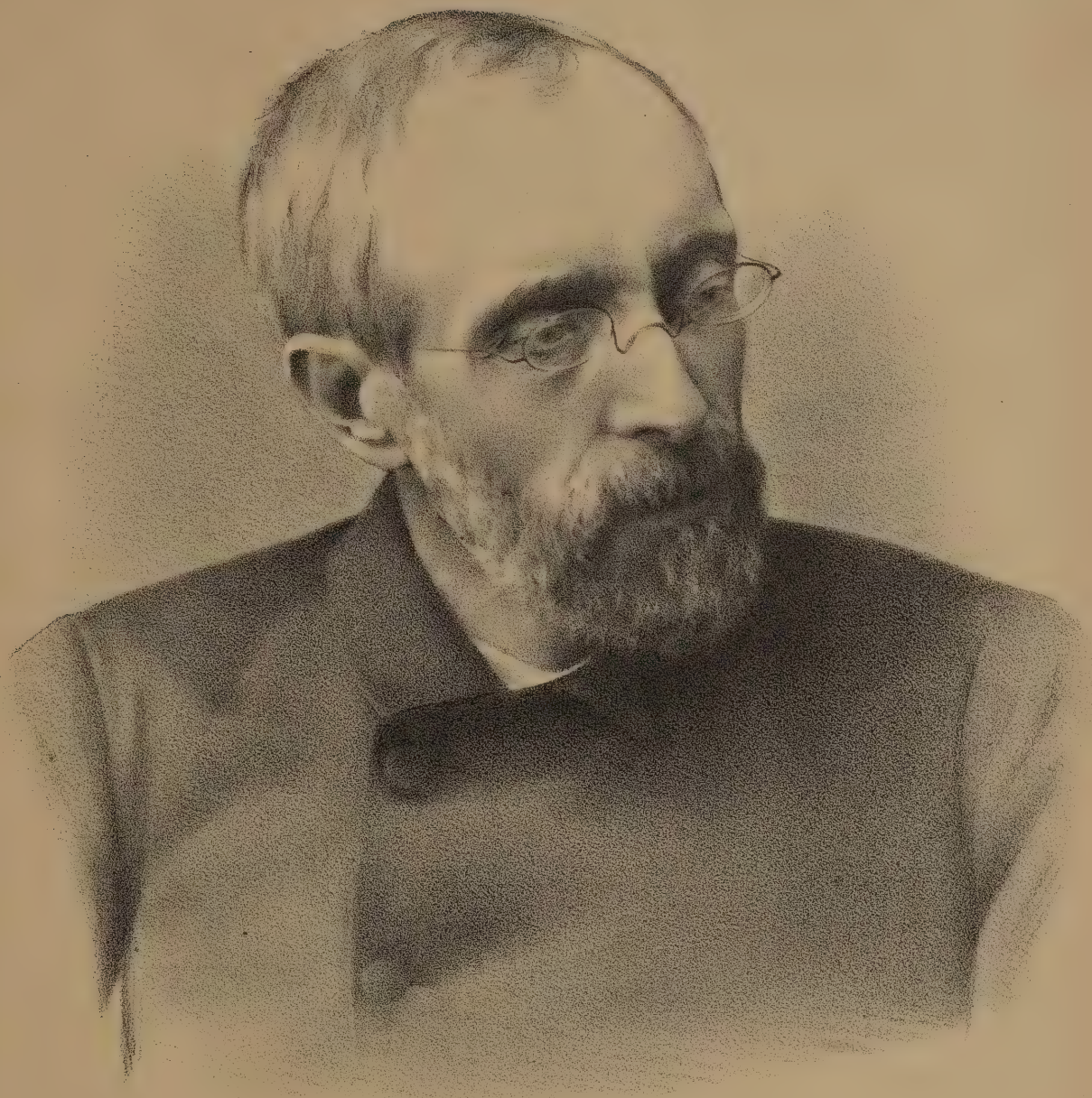
involution of the womb, tight clothing, chronic cough, and a variety of diseased conditions it is needless to enumerate.

Whatever the cause or causes of uterine displacement, they may be divided into two classes: temporary and permanent. The former being preventible and generally curable, the latter being far less amenable to treatment. If the uterus is only displaced by its own weight, and a relaxed condition of its normal supports, and contributory causes are of such a nature as to be removed, then much may be hoped for from a rational treatment, mechanical or otherwise, adapted to the special circumstances of each case. If, on the other hand, we find some more or less permanent mechanical causes of displacement, if the uterus is displaced by the product of disease, such as tumours, inflammatory exudations, hypertrophy of neighbouring organs, etc., we have little to hope for from mechanical treatment, and must direct our attention chiefly to the treatment of the permanent cause rather than to the mechanical effects. As a broad general principle, we may judge of the temporary or more or less permanent character of the cause by the mobility or immobility of the uterus. Whatever its position, if we find that it cannot be altered by bi-manual efforts, or by the sound, (although I am strongly of opinion that the sound can rarely succeed when bi-manual efforts have failed,) then I think it is a safe conclusion that any kind of pessary, however carefully adjusted, will be not only useless but mischievous. I do not propose to discuss immovable displacement, but will confine my attention solely to that class of case in which the uterus can be replaced in its normal position by assuming the horizontal position, or by gentle manipulation.

If we admit that a slight degree of anteversion is the normal condition of the uterus, by far the commonest displacement is that which women generally describe as "a bearing down," and which we term procidentia; and this condition is, unhappily for the sufferers, often allowed to proceed from bad to worse, until such a serious degree of discomfort and inconvenience arises, that as a last resource a doctor is consulted. In such cases we commonly find that the horizontal position is almost sufficient to effect a replacement of the organ, and, if the disease be not too far advanced, may suffice without other treatment to effect a cure. This will be more particularly found to be true in such cases as have been mainly caused by deferred involution, relaxed condition of vaginal walls, and of uterine ligaments, and any kind of debility which yields to a tonic plan of treatment. But we meet with a large number of cases in which the uterus, however easily replaced, at once returns to its abnormal position, unless retained by mechanical means, and in which prolonged and absolute rest, however desirable, is impracticable, in such cases a carefully selected and well adjusted pessary will often prove our best resource.

Some writers express doubt as to the curability of uterine displacement, and I think if pessaries alone are to be relied on they are very nearly right. I believe that many patients however may be permanently cured by prolonged and absolute rest, if they can only be induced to submit to it. Therein lies the difficulty. The slighter and more curable displacements are not usually productive of acute pain; there is a sense of weight and uneasiness, relieved by rest, and exaggerated by fatigue or exertion, and that seems to most women an insufficient degree of suffering to necessitate complete rest. They find that a pessary retains the uterus *in situ*, without causing pain or discomfort after a very

¹ Read before the Nottingham Medico-Chirurgical Society, April 6th, 1888.



Yours Very truly
A. H. Thomas

short time, and they rest satisfied with palliative measures, because curative treatment would interfere with household and maternal duties. A few years ago I attended a lady who had married young, and who had been confined three times, the intervals between her pregnancies being very short; she was of an active temperament, and had been governed by the "ninth day" superstition, not getting up before that had elapsed, but very soon after. When I first saw her she was pregnant for the fourth time, and she complained of much bearing down. I found that a former medical attendant had inserted a ring pessary for a well-marked procidentia. The pessary, although limiting the descent of the womb, did not restore it to its normal position, and caused considerable irritation and discomfort. On examining her in the erect position, the gravid uterus was low down pressing on the perineum, the os uteri could be felt just within the sphincter vaginae, but on lying down the womb fell back almost to its normal position. I advised her that if she would only consent to keep her bed for at least a month after her confinement, she would be very likely cured of the bearing down permanently, but warned her that if she got about too soon the tendency of the disease would be to get worse rather than better. She agreed to do as I advised, and the result fully justified my anticipation, as she has not suffered since, although she has had additions to her family. I quote this case as a typical, although commonplace instance, of the more curable forms of displacement. It would be interesting to obtain the history of some of those women who, suffering from procidentia, have been compelled either by surgical injuries or disease to involuntarily submit to prolonged rest. Such cases must be far from uncommon, although I have failed to meet with any records of them. I attach great importance to general and constitutional treatment of procidentia, but after all, in the great majority of cases, we are forced to add purely mechanical treatment by means of pessaries.

The pessaries generally used for procidentia are the ring, the spherical or egg shaped vulcanite ball, a Gariel's air, all of which derive their support from pressure on the vaginal wall, and pessaries of which Barnes' and Napier's are types, deriving their support from a stem which is maintained in position by bands and belt. The former are the more comfortable, but the latter more likely to produce permanent good effects. Any pessary which is supported by pressure on the vaginal walls cannot be curative; in fact the distention of the vagina must tend to its shortening, and so the uterus is slightly dragged down. There is another defect in all intra-vaginal pessaries, and that is by dilating the vagina they often require to be replaced by larger sizes. The ring pessary is perhaps on the whole the most generally useful, and does not require very much attention. I need not relate those precautions which may be found in every text-book. The egg shaped or spherical vulcanite or box wood pessary is a useful one for those patients who are perhaps only able to be seen at long intervals; it can be easily cleansed and replaced by the patient herself, and the pressure on the vaginal walls is much more evenly distributed than is the case with ring pessaries. I have in my own practice discarded almost every other pessary in the treatment of simple procidentia. My experience is that few women will submit to the almost invariable discomfort caused by those pessaries which are supported from without; the tapes or india rubber bands get wet and soiled, the skin gets chafed, and although on theoretical grounds I should prefer them, I find they can seldom be worn long enough to do any lasting good. In

very extreme cases, after the climacteric period, Sims' or Emmet's operation will often prove beneficial, or the shortening of the round ligaments as practised by Alexander. My colleague, Dr. C. V. Taylor, has performed Schroeder's operation two or three times with excellent immediate results, and I shall not hesitate to treat suitable cases when they occur in that manner. The repair of a ruptured perineum is so obviously a necessary preliminary to other treatment, that I need only mention it.

Until 1773 we have no records which prove that either flexions or versions of the uterus were recognised, but in that year Levret, a Frenchman, described anteversion as a displacement of the uterus, of which authors had not hitherto spoken, and Dr. William Hunter appears to have been the first to describe retroversions some years later. Since that time great advances have been made in our means of diagnosis and of treatment. It is a question not to be answered hastily whether the increased attention which has been paid to uterine displacements, and the facility with which they may now be diagnosed, has not on the whole proved rather a curse than a blessing to suffering female humanity. Scanzoni lays down as a law "that flexions of the uterus are never of much importance except when some other affection of the uterine substance is associated with them," and I think the tendency of modern opinion is leaning more and more towards the rule laid down by this old writer. Flexions have been recognised and treated as such, endless pessaries have been devised, and in some cases may have done good. There can be little doubt that many cases will improve whilst a patient is wearing a pessary, and no doubt the whole credit of any improvement is attributed to the pessary, but often the relation of cause and effect is assumed without much reference to other factors acting simultaneously.

It is generally admitted that slight anteversion is a normal condition, and that even very marked anteversion will often exist without causing any symptoms; the patient is quite happy and contented until some other cause leads to an examination, and then too often the anteversion receives all the attention, which should more properly be directed to the additional circumstances which first directed attention to it. If we assume anteversion to be in itself a diseased condition, it is one which *per se* needs no treatment unless severe mechanical dysmenorrhœa accompanies it, and can be accounted for on no other hypothesis than that it is caused by the deformity. Thus the treatment of anteversion resolves itself practically into the treatment of any accompanying condition, which either aggravate or are aggravated by the flexion. I question seriously whether any kind of vaginal pessary, however ingenious, has the slightest influence on anteversion; when they seem to do good it is by remedying some attendant procidentia. The only kind of pessary which can be proved to straighten the flexion are stem pessaries, which require very great care, and are not devoid of danger. When stem pessaries in the hands of some gynæcologists are believed to be of great value, the beneficial results obtained are not improbably due to other points of treatment, which are carried on simultaneously—rest, attention to general health, the state of the secretions, etc.

Anteversion is not in my experience a very common condition of a healthy womb. Women with flabby abdominal muscles and pendulous abdomen are the most likely subjects for this form of displacement, as a sequel to congestion or sub-involution after childbirth. If the womb is weighted by a fibroid, bound down by inflam-

matory adhesions, or pressed upon by abdominal tumours or hypertrophy of any neighbouring organs, or is the subject of malignant or other disease, anteversion is not likely to be remedied by mechanical means, and it is beyond the scope of my intention to refer to the treatment of permanent causes of displacement. Probably Kiswisch was correct when he accounted for the greater frequency of posterior displacement by the fact, that whereas the accumulation of urine in the bladder takes place from below upwards, that of feces in the rectum is from above downwards, and that natural mechanical causes favour retroversion rather than anteversion. If the uterus is movable, and can be replaced by bi-manual efforts, or even by the sound, a less desirable method, then treatment may be in many cases very successful. When rest can be enforced, the horizontal position, with the head of the bed rather lower than the foot, should form an essential part of the treatment, congestion if present must be treated by local and constitutional means. A bandage or abdominal belt is a useful adjunct, provided that the pressure may be greatest at its lowest circumference. If laced, the lacing should always be from below upwards. I cannot say that I have any great faith in any of the numerous pessaries which have been devised for the treatment of anteversion. If there is any local congestion or inflammation, pessaries would only serve to increase it. Sometimes the use of tampons, as applied by Dr. Marion Sims, may be well borne when pessaries are contra-indicated. If anteversion exists without any accompanying procidentia, pessaries may in my opinion generally be excluded from any system of treatment adopted.

Posterior displacements are much more commonly met with than anterior ones. One cause is over-distension of the bladder; and a brief consideration of the relations existing between the uterus and the bladder at once explains the *modus operandi*. Also Douglas's pouch forms a very convenient receptacle for the fundus of the uterus when retroverted or retroflexed. The Hodge pessary, so invaluable in retroversion, is less generally serviceable in retroflexion, the upper bar resting in the concavity of the flexion, a large flaccid uterus may easily roll over the top of the pessary, in which case no relief will be obtained.

The reflexed uterus may generally be easily replaced by manipulation or the sound, only to fall back again when the finger or sound is withdrawn. In such a case we have two alternatives: the insertion of a stem pessary, or packing the posterior vaginal fornix with tampons. I think that stem pessaries should only be resorted to in extreme cases, after other less dangerous methods have been exhausted.

The treatment of retroversion is much more satisfactory than that of either retroflexion or anterior displacement, but considerable care and judgment is required to select from amongst the many modifications of the lever pessary one which is exactly adapted to any particular case. I prefer in most cases a simple vulcanite pessary; the size must be carefully attended to, as too small a one will slip, and too large a one will produce unnecessary discomfort in the wearing, as well as pain during its introduction. Having replaced the uterus, and adjusted the pessary, it is desirable in out-patient practice to let the patient remain for a short time, walking, standing, and sitting down, as the relief afforded by a well-adjusted pessary is immediate. The surgeon, by adopting this plan, at once tests the value and suitability of the mechanical appliance. If no sensible relief is afforded, and still more if any pain ensues, it will

be useless to allow the pessary to remain, as it is almost certain to do harm. The great advantage of the lever pessary is that it is not retained *in situ* by distension of the vaginal walls; thus it can be worn for long periods if occasionally cleansed and replaced, without causing soreness or irritation. I do not feel at all sure that the best adjusted Hodge pessary is ever in itself curative, I should rather say it is like the crutch to the lame man, of immense use whilst nature is doing her work, affording a useful support to a weak part, and nothing more. I look upon a pessary as a mechanical contrivance which, except in incurable procidentia or prolapsus, should be only considered as a temporary adjunct to other treatment; it has however, no doubt by some practitioners been much abused. I have come across patients who have worn pessaries for ulceration of cervix, for hypertrophy of the cervix, or for uterine tumours, or for a mere sense of bearing down in which no displacement of the organ existed.

Pessaries are contra-indicated—1. In recent displacements due to sub-involution of the uterus after confinement. 1. When the uterus is fixed and immovable, whatever its position. 3. Whenever they cause actual pain. 4. During pregnancy. 5. Whenever they fail to retain the replaced uterus to some extent in its normal position; for example, if an antelexion continues, a pessary notwithstanding, the pessary is useless. The rules which have hitherto guided me in the use of pessaries are few and simple—1. To replace the uterus as a necessary preliminary. 2. To select the smallest sized pessary which is capable of fulfilling the desired object. 3. Only to continue their use when an increased sense of comfort is the result. 4. To remove them from time to time, that they may be cleansed, and any improvement may be noted. 5. To discontinue their use at the earliest time which is practicable. 6. Whenever there is a reasonable hope of cure, to avoid any kind of pessary which is retained *in situ* by distension of the vaginal walls.

In conclusion, the treatment of the various displacements of the womb, must, to be successful, be general and constitutional as well as mechanical. Too much importance should not be attached to the mere fact of displacement, unless it is productive of clearly defined symptoms which cannot be legitimately attributed to other causes. Slight deviations from the normal position do not need any special treatment, although it may be very desirable to lay down certain precautions for the guidance of the patient. An indiscriminate resort to pessaries in every form of displacement cannot be too strongly deprecated, for their injudicious use often perpetuates the evil they are intended to remedy.

A FEW COMMON ERRORS IN THE TREATMENT OF FRACTURE.¹

BY ROBERT JONES,

SURGEON TO THE LIVERPOOL STANLEY HOSPITAL.

IF we wish to succeed in the treatment of fractures, we have to regard at least three points. The first is that fixation should be efficient and sufficiently long continued. The second, that apposition be good, and the third, that the circulation of the limb be not unduly hampered. Elementary as these canons appear to be, most failures can be traced to disregard of them, and this not because of scepticism concerning their importance, but by reason of defective knowledge of the means to attain desired ends.

¹ Read at the North Wales Branch Meeting at Colwyn Bay.

If we wish fixation to be efficient, we must see that leverage is not deficient. We must not treat the surgical neck of the humerus by an inside splint reaching only so high as the axilla. Nor should any theories we may hold concerning stiff wrists prevent our remedy for Colles's fracture from extending to the knuckles; nor should fractures of the upper third of the ulna and radius be treated without locking the elbow joint; nor for similar reasons should the knee be left free when the upper portion of the tibia has been severed.

To secure efficient fixation we should employ splints with sufficient concavity to permit of their slightly overlapping limbs. By this precaution we avoid that constant twisting which characterizes the movements of limbs confined in the old-fashioned plane splints. In relation to circulation we should bear in mind that any interference with the blood supply to the fractured ends materially retards the curative results, and for this reason we should avoid tight bandaging. Many cases of non-union are due to this error. A badly set fracture generally gives rise to no worse complication than deformity, but tight bandaging may be guilty of any crime between simple discomfort and gangrene. Most frequently, however, delayed-union is the evil result which must be laid at its door. On several occasions I have been shown cases which have far exceeded the normal period of treatment where the fractures have apparently made no effort at repair. Success is generally assured in such, provided free circulation be encouraged and local stimulation applied by means of fist or hammer. Gentlemen will bear me out when I say that in nearly all cases of ununited fractures, say of the femur, patients will unroll yards of bandage, which leave marked depressions behind, and which strongly suggest the continuance of an initial error.

The same results occur if splints are chosen which are not sufficiently wide. It is always better in cases of fracture to apply splints wide enough to admit of a space between the bandage and flesh. Under the bridge so formed the blood supply to the limb is unhindered, and there is little or no danger of any congestive disturbances. Again, in this connexion, we have many errors in the distribution of pads. There is a danger of so placing them, that although apart from each other, they would if approximated form a ring around the limb. The mechanical power of the pad is almost unlimited, and it requires, therefore, much care that error be excluded in its application. Pads should never be applied over large blood-vessels.

A very common mistake consists in carrying the splints for fractured forearms or legs too high. This is very easily overlooked, and should be remembered. In setting a forearm it is well to flex the elbow, and so make sure that the top of the splint does not press into the bend of the elbow. The same principle holds good in the case of the popliteal space. I have committed both these blunders, and the patients rarely forgot to indicate their contempt for my mechanical *acumen*.

Doubtless it is very important to attain good apposition, but with the exception of fractures of the lower end of the fibula and radius, it is not important to attain immediate reduction of deformity. It is one thing to strive for immediate symmetry of limb, another to aim at putting the bones in absolute line. No matter how great the swelling or painful the limb, it should not be allowed to remain crooked, and any bone pressing on the skin should at once be replaced. Neglect of this precaution may result seriously, either in relation to the vitality of the limb, or in transforming into a compound that which

should have remained a simple fracture. A careful adjustment of pads will rectify without any difficulty any bone irregularity during the first fortnight, and with special methods will correct misplacements much later. Great care is necessary from the point of view of apposition in the choice of splints, and without going into details I would condemn the routine use of plaster-of-Paris and of Gooch splints. The former if put on at once, as is now a growing custom, becomes slack as soon as the swelling has subsided, and admits of motion. It practically does away with the intelligent use of pads. It does not allow harmless inspection, and, therefore, what should have been corrected becomes confirmed. If put on when the swelling has disappeared, it is still a form of circular compression, which tends to interfere with the vitality of the limb, and often delays union. When placed round the thigh in fracture about the fifth week, to allow of walking, its action is very pernicious. A thigh of normal length may be indefinitely shortened, as the support merely represents a casing sufficiently loose to allow of a telescopic action of the leg within it. The drawback in principle of the Gooch splint, now so generally used, should be very apparent. For example, consider its bearings in fracture of the radius: it will not yield lengthwise, but laterally it will to any extent, the result being that it may press the fractured ends of the radius on to the ulna, if the bandaging is sufficiently stern. In fact, the splint depends largely upon the bandage for the shape it takes—a defect surely sufficiently grave.

Unless very carefully superintended, pads should not be placed on thinly-clad bones, otherwise a slough will result. Twelve hours should be the outside limit allowed it to remain. Then, whether a complaint be made or not, the spot should be inspected. Over and over again I have told house-surgeons not to mind the patient's sensations, but to feel convinced that after a certain pressure a slough may be expected. To the astonishment of some who have neglected my advice, they have discovered a black slough, although the patient has been in absolute comfort. If therefore it becomes imperative to employ pads in such positions, we should remember to change frequently, and at stated intervals, regardless of the patient's feeling or comfort. Perhaps the most serious error in the treatment of fractures is the two early casting off of restraint. This in the case of pauper patients is unfortunately more or less inevitable, because of the coercive tendencies of hospital committees, but in the well-to-do classes some rule should govern our conduct. Over and over again we read of cases sent out with normal limbs, coming back two months later with two and three inches shortening. Here it will be of interest perhaps if I state the time I am in the habit of keeping patients under restraint for various fractures.

	Total Restraint.	With further Partial Restraint.
Femur	8 weeks	3 months
Tibia and fib.	5 weeks	2 months
Fibula	4 weeks	2 months
Potts	4 weeks	1 month
Humerus	6 weeks	6 weeks
Radius and ulna ..	4 weeks	2 weeks
Colles's	5 weeks	2 weeks
Clavicle	4 weeks	2 weeks

It is well to place a patient suffering from fractured femur in a calliper splint so soon as the seventh week is past, and then no amount of perambulation will interfere with the length of limb. It is very necessary during the period of total restraint not to fall into the error of curiosity. Some surgeons are never content unless they worry the fractured ends week after week to see how

consolidation is getting on. Such procedure is as unscientific as the action of a cook who opens her oven every five minutes to see how the hot pot progresses. Until the normal period of the onset of consolidation, absolute rest should be ensured. In spite, however, of this injunction, the progress of the fracture should be watched, and deformity from time to time remedied. This can only be done by so arranging splints, that while one is off there remains a sufficient support for the fracture during inspection. There is no difficulty in this, and it should always be insisted on. If union is delayed, patiently wait without panic for three weeks longer, and give the seat of fracture meanwhile a severe pummelling with a covered pestle, after Mr. Thomas's method. Books warn us against putting pressure on riding fragments; and, of course, common sense would tell us not to press against a sharp end of bone. It is often, however, excellent practice to forcibly keep a riding fragment down, and only requires the exercise of ingenuity for its attainment.

When fractures take place into joints, great care must be taken to ensure perfect and uninterrupted rest. Avoid the text-book advice of passive motions. Time will not admit of my discussing this, but I may briefly state that if the joint becomes inflamed, motion will increase its severity; and if there be no inflammation of joint, motion will increase the quantity of secreted callus, and limitation of joint function will be thereby facilitated.

Just a word or two in regard to the treatment of special fractures. I have elsewhere treated more fully of Colles' fracture, but I would repeat here the necessity of at once thoroughly reducing the deformity. If this be done it will give but little subsequent trouble. The after-treatment enjoins rest for the wrist joint; five weeks incarceration, and no passive motions. Should, however, deformity meet the efforts of surgeons, this can be rectified even so long as nine months after injury, by means of a special wrench used by Mr. Thomas for club-foot. I was the first to attempt the reduction of old Colles' and Potts' fractures, and published a list of six successive cases. Since then Mr. Thomas has added to the number, and I have operated on fifteen patients. The only additional point to remember about Potts' fracture is that the ankle during treatment should be kept at right angles, otherwise tenotomy may have to be ultimately performed. Nearly every practitioner dealing with Potts' fracture counsels and practises delay during the swollen condition of the injured ankle. This is a bad practice, and for it should be substituted early and complete reduction.

We all know that despite the worst treatment, fractures will recover, and that oftentimes patients left to the tender mercies of nature will recover from even serious injuries. Now and again, however, failure will threaten, and we have to fall back upon principles which, if of advantage then, should be our routine custom. By aiming always at restoring the limb to the condition prior to accident, we do not merely avert non-union, but promote an elegant and artistic result.

INFANTICIDE: AN INQUIRY INTO ITS CAUSES, AND THEIR REMEDY.

BY FRANCIS VACHER, F.R.C.S.,

MEDICAL OFFICER OF HEALTH FOR BIRKENHEAD.

(Continued from page 214).

How to assist the unmarried mother, and help her to bear her burden, or relieve her of it, is a social problem most difficult to solve. The simplest course *appears* to be for the State or some charitable organisation to accept the

responsibility of bringing up all infants deposited for this purpose. This is a large and a costly undertaking, and the results in those countries where it has been tried are not calculated to recommend it. In St. Petersburg, where there is an enormous foundling hospital, the death-rate which obtains among illegitimate children, is as high as elsewhere, and the testimony of competent witnesses is that female unchastity is but lightly censured when the effects of it are so easily removable. It has also been found that when arrangements are made to enable any person to leave a child, without the person being seen or questioned, they will be used, to some extent, by the married poor. Thus the responsibilities and duties attaching to married life are interfered with, and early improvident marriages are encouraged.¹ What seems to me a far more desirable way of dealing with the difficulty, is by providing day-rooms, food and attendance for young children during the day. In most towns of any size there is a *crèche*, and probably wherever one has been opened it has found customers. *Crèches* are worked very cheaply, and cost little to establish, any ordinary house being suited for them; and if they were generally provided, unmarried mothers would have the accommodation they need, at least, all those who do not sleep on their employers' premises. For the children of domestic servants, and those similarly circumstanced, the *crèche* might afford lodging and maintenance by night as well as by day. One or two women always sleep on the premises, and little cribs are an essential part of the furniture, even in a nursery only used by day. As no one would wish to make a profit off such institutions, and money spent in maintaining them would be, at least, as well laid out as money subscribed to hospitals, the charge for each infant might be fixed at 2d. per day, or 4d. per day and night. A thorough system of efficient night and day nurseries would certainly do much to protect illegitimate infants from violence and neglect, or being done to death by a mercenary "adopter." There is a remedy that lies yet deeper, if one could only apply it. Were society to regard seduction as it regards the non-payment of a bet, and ostracize the seducer, seduction would cease to be a popular amusement for the wealthy, and the sad stories of Agnes Primrose and of Hetty Sorrel would not be repeated day by day. Yet, how easy it would be for society to treat the man as she treats the woman, and make both bear the burden and shame of their acts.

4. *Insurance of the Lives of Infants.*—All who have visited much among the poor know how very general is the practice of life insurance among them—insurance in so-called burial clubs. The agent may be seen going his rounds like the landlord's collector. The latter is commonly called the "rent man," and the former, by way of distinction, the "dead man." House after house is visited by

¹ "Considering the extraordinary mortality which occurs in these institutions, and the habits of licentiousness which they have an evident tendency to create, it may, perhaps, be truly said, that if a person wished to check population, and were not solicitous about the means, he could not propose a more effectual measure than the establishment of a sufficient number of foundling hospitals, unlimited as to their reception of children. And with regard to the moral feelings of a nation, it is difficult to conceive that they must not be sensibly impaired by encouraging mothers to desert their offspring, and endeavouring to teach them that their love for their new-born infants is a prejudice which it is the interest of their country to eradicate. An occasional child-murder from false shame is saved at a very high price, if it can only be done by the sacrifice of some of the best and most useful feelings of the human heart in a great part of the nation."—Rev. T. R. Malthus, on the Foundling Hospitals of St. Petersburg and Moscow.

him; in many he has his clients and gathers his weekly payments, and at others he canvasses. He is paid a regular percentage on what he brings in, and generally, if not always, a special bonus on all new business, so that he is directly encouraged to book as many fresh lives as possible; and the "quality" of the life is little considered. Of course old persons have to pay higher premiums; but as for babies and little children, they seem always to be accepted at a uniform rate, and there is little or no inquiry as to health and strength. The maximum sum for which an insurance may be effected on the life of a child under five years of age is £6; but just as there is practically no inquiry as to whether a life is a good one or a bad one for an office to accept, there is neglect to ascertain whether any insurance has been previously effected. Thus, when several burial clubs are doing business in the same locality, it may happen that the death of a young child is worth £12 or £18 to its parents or guardians; and there are conditions under which such a sum as this presents a terrible temptation—*e.g.*, when the family is something more than a quiverful, and the bread-winner, through scarcity of work, or ill-health, or hard drinking, is barely earning enough to pay the rent. The vision of these golden sovereigns is like a ubiquitous devil, urging the wretched parents day and night to do devil's work. Who can doubt that the poor thus tempted are occasionally guilty of murder by exposure or by drugging, and more frequently of murder by neglect? I have pointed out that the insured child may be puny and sickly even at the time the policy is taken out, and no extraordinary neglect likely to attract notice is required to kill such a one.

The remedy for this evil must of course be a change in the law, but quite a simple change will suffice. It would be very unwise by any act to thwart the prudence and forethought which moves the working classes so generally to subscribe to benefit societies, sick and burial clubs, etc. If life insurance is a praiseworthy precaution for the upper and middle classes it is even more praiseworthy for the poor. The removal of a father or mother by death ordinarily entails a direct loss independent of the cost of burial, and so does the death of any worker who has been helping others to live. In the case, however, of an infant or young child, the one legitimate motive for insurance is to provide funds for its burial. This being so, what I would propose is a short legislative measure prohibiting altogether infant life insurance by companies or firms, and empowering the Government to enter into an agreement to inter any child free of cost, on the parents or guardians taking out a policy on its life and paying a small monthly premium at the nearest post office. The working of such an arrangement would cost very little. Indeed, all expenses could be met and decent burial secured for less than half the payments now made to burial clubs in respect of young children. However, economy is a secondary consideration; the main recommendation of my proposal is that in this way all possibility of temptation to infanticide to obtain burial-club money would be done away with.

5. *Drunkenness of Parents and Guardians.*—Of all the causes of child murder, especially murder by omission, called in this paper constructive infanticide, the drinking habits of parents and guardians are the most familiar, the most flagrant, and the least amenable to remedy. "It is impossible," says Dr. Guthrie, a man of large experience among the poor, "to exaggerate, impossible even truthfully to paint, the effect of this evil, either on those who are addicted to it or on those who suffer from it—crushed

husbands, broken-hearted wives, and, most of all, those poor innocent children that are dying under cruelty and starvation, that shiver in their rags upon our streets, that walk unshod the winter snows; and, with their matted hair, and hollow cheeks, and sunken eyes, glare out on us wild and savage-like from patched and filthy windows." When the male parent is a drunkard the results are sad enough, for the tendency to inebriety is transmitted at least as frequently as tubercle is transmitted; but when the female parent is a drunkard, what chance of survival has the poor struggling infant life? Such a life is one continuous strife with death, and those who first succumb are the least unfortunate. Drunkenness, being one of the main causes of premature birth, the fight with death begins before independent life begins. Even if the infant be carried to full term it has been starved and drugged during the whole of intra-uterine life. Then from the birth the money that should clothe it and provide a warm home for it is spent in strong drink. If it be brought up at the breast the nourishment it receives from the birth is adulterated with strong drink: if it be brought up "by hand," what chance is there that a drunken mother will provide wholesome food? It is early taught the taste of alcohol to drown the cry of pain. Many a one the mother overlies in her drunken sleep. Many, while yet in arms, are taken out to beg, and, as soon as they can walk, sent out to beg or steal:

Till the stones of every street
Know their little naked feet.

And when death claims his victims from among this forlorn band the death is not certified as it might be:

Primary cause: Drunkenness of parent.

Secondary cause: Exposure, and want of proper food.

The cause certified and entered in the register is bronchitis, or pneumonia, or tuberculosis, or debility, etc., which is not untrue, but only a part of the truth. The result is that public opinion is never aroused to a sense of the waste of infant life which is going on, and year by year there is the same sacrifice of little ones—before their birth appointed unto death. Surely in their cold and nakedness, in their hunger and thirst, in their sickness and suffering and peril, they are made a spectacle unto the world, and to angels and to men.

Will anyone venture to say that such a wrong admits of no remedy; that this leaving helpless infants to the mercy of merciless drunkards is unavoidable? It is thought perfectly fair and reasonable when a man abuses the privilege of enfranchisement, to disenfranchise him, or when a man misuses his liberty to deprive him of it. It is obviously not less fair and reasonable, when parents prove by their conduct that they are unfit to exercise parental control, that they should be prevented from exercising it. How this might best be done would, of course, have to be properly debated, and due care taken that the rights of decent parents were safeguarded.

A ready way of attaining the desired end, as it appears to me, would be to empower magistrates, on a third conviction for drunkenness of a mother, or on a first conviction for drunkenness with neglect or cruelty to her infant, in addition to any penalty he may inflict, to order that the prisoner's children be taken out of her custody, and for a longer or shorter time placed under the protection of the guardians of the poor, or (at the father's request) of some female relative of good character. This may appear like cutting a Gordian knot, instead of untying it, but it will scarcely be said that it is contrary to the spirit of English law. At any rate, it is a bare suggestion—the details of

any measure the circumstances would warrant may well be left to legislators and lawyers.

I have, for the sake of explicitness, treated of the five causes of infanticide separately, but it is obvious that any child-murder may be due to two or more of these causes. Indeed, it is not only conceivable, but probable, that a child suffering from congenital disease may be also illegitimate, and insured in a burial club, and have a drunken mother. Generally, it may be said that the greater the number of death-factors menacing an infant's life, the less the chance of its survival. Owing to the causes being so often combined, it is difficult to estimate their relative fatality. However, so far as I have had opportunity of judging, I believe the five causes I have named are fatal in an order inverse to that given, the drunkenness of parents and guardians being the most frequent cause of infanticide, and early improvident marriages the least frequent.

DYSMENORRHOEA.¹

BY AMAND ROUTH, M.D., B.S. LOND., M.R.C.P. LOND.,

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(Continued from page 212.)

Constitutional Causes of Dysmenorrhœa.—These are rather numerous, and where not actually the cause, may seriously aggravate the pain due to local conditions. Anæmia and chlorosis are very common causes of the spasmodic type, and with them may be associated exhausting diseases, such as diabetes, Bright's disease, or phthisis. The specific fevers often cause dysmenorrhœa, by setting up a low form of endometritis, and both typhoid and scarlatina are apt to lead to cirrhotic change in the ovaries producing dysœotocia. Of the more general diseases, acute and chronic rheumatism are most likely to leave pelvic mischief from the fibrous tissue of the ovary becoming affected.

Constitutional Treatment of Dysmenorrhœa.—As I have said, successful treatment depends upon finding and removing the cause. As a rule, it is irrational to mask the symptom of pain by giving opiates, whether by mouth, rectum or subcutaneously, though where we are called in during a severe paroxysm, it may be necessary, but I would suggest that we should always add *atropine*, *belladonna*, or *hyoscyamus*, which relax muscular spasm, and enable us to use smaller doses of opium, and to avert sickness and constipation. The main objection to opium and chlorale is that their monthly repetition tends to their abuse. This objection holds even more strongly as regards alcohol, access to it being easier. *Nitro-glycerine* and *amyl nitrite* are excellent drugs for spasmodic cases, their action being prompt and effectual, though often only temporary; they answer best in dysmenorrhœa due to fibroids, especially when the catamenia is scanty. The *bromides* are indicated in ovarian dysmenorrhœa, and especially in those cases where menorrhagia of tubal or ovarian origin exists. *Cannabis indica* in $\frac{1}{4}$ to $\frac{1}{2}$ grain doses of the extract, or in 2 to 10 grains of the tannate of cannabin are valuable as a substitute for opiates, and are especially useful when menorrhagia coexists, being most efficacious in obstructive dysmenorrhœa, due to fibroids. It is well to use one chemist's (e.g., Squire's) preparations, but, unfortunately, besides its variable strength, it varies much in its effect upon individuals, and should therefore be given with caution.

Tr. cardam. co., with sp. chlorof., make an agreeable combination, and is of signal service in simple cases. Tr. chlorof. co., or sp. etheris co., act similarly. Their effect is much enhanced by adding large doses of liq. amm. acetat. ($\frac{3}{4}$ j. to $\frac{3}{4}$ ss.), both in spasmodic and congestive dysmenorrhœa. A favourite prescription is: R—Tr. cardam co., $\frac{3}{4}$ ss.; sp. chlorof., \mathcal{M} xx.; liq. a. acet., $\frac{3}{4}$ ss.; Tr. bellad. \mathcal{M} x.; aq. cinnamon, ad. $\frac{3}{4}$ i. If the pain is very acute, Battley's solution goes well with this, and to encourage sweating, a drop of sol. nitro-glycerine (one per cent.) may be added (with ammonia). Bromides may be substituted for the belladonna if indicated. A week's use of guaiacum, or salicylate of soda, will often prevent dysmenorrhœa of rheumatic origin; whilst for the frontal and migraine type of headaches, which so often accompany the onset of catamenia, nothing answers so well as antipyrin. In fifteen-grain doses, to be repeated in two hours if necessary. In all cases of expected dysmenorrhœa, the bowels should be freely evacuated.

Measures auxiliary to the above therapeutic remedies should not be admitted. Rest before and during the period is all important, as also is warmth of skin; much relief may often be afforded by warmth applied over the abdomen, or to the feet by any of the usual methods. Heat should not be applied solely over the sacrum, as it is then apt to check the menstrual flow. After the period is over, opportunity is afforded for preventive treatment. Anæmia and chlorosis may be dealt with by iron, arsenic, acetate of ammonia, and purgatives, and much may be done in the three weeks' interval to make the next period freer and less painful. Distant organs should be treated if affected, and their functions regulated, especially those of the liver, skin, and bowels. Abuse of alcohol, sexual excess, mental or physical overwork, improper or deficient food, unsuitable or tight clothing, may also be items whose avoidance may do good in a given case.

Local Treatment.—There remains now the treatment of the local causes of dysmenorrhœa. We will first assume that we have found no flexion, version, or descent, no past or present metritis, para- or peri-metritis, no fibroids, no subinvolution, no ovarian or tubal disease, and that we therefore proceed to an intra-uterine examination. We may then find that acute pain of a radiating character is caused by the passage of the sound, either as it passes along the canal, or when it touches the fundus (which it must be remembered is always slightly sensitive), and that blood issues from the womb when the sound is withdrawn, no difficulty having been experienced in its introduction or withdrawal. This would point to either corporeal or fundal endometritis, as my father first pointed out, and would require rest, intra-uterine treatment, and medicine according to circumstances. Again, we may find the mucous membrane of the uterus so irritable that the sound will cause a spasmodic contraction exactly resembling that which the patient has at her period, analogous probably to spasm of the glottis when irritated by a foreign body. If we can lessen this hyperæsthesia of the uterus, we shall cure our patient. The spasm here assumed to be set up is not of a ring of muscular fibres only, as is said to occur in spasmodic urethral stricture, or as occurs at the vulvar orifice in vaginismus, but to be a real and painful constriction of all the uterine muscles tending to *expel*, rather than to *grip*, the sound being often forced out again, instead of held tightly as in obstruction. Again, we may find that the sound

¹ A Post Graduate Lecture, delivered at Charing-Cross Hospital, on January 6th, 1888.

will not then readily pass, and to make sure that it does not catch in the mucous membrane of the endo-cervix, we should use a rounded bougie, No. 8 or 9. If a marked flexion exist, the fundus must be elevated on the finger, or the cervix drawn down with a hook or toothed forceps. Occasionally we may find a difficulty in passing through the os uteri externum, especially with a conical cervix.

The old method of division of the cervix, or "hysterotomy," is now rarely (and should be never) employed, though a bilateral nick on either side of a small external os uteri is sometimes of use, and can be done with either a knife or Küchenmeister's scissors. After any incision such as this, rarely necessary for dysmenorrhœa alone, some lint steeped in iodine and glycerine should be pushed into the cervix for twenty-four hours. For dilating the uterus *above* the external os, hysterotomy has now been discontinued, and the great dangers arising from hæmorrhage and sepsis thereby removed. Tents, such as sponge, sea-tangle, or tupelo, are also unnecessary for the cure of dysmenorrhœa, and another source of danger is thereby removed, pyrexia rarely following the methods now employed. The dilators now used are mainly copied from those used for urethral strictures, the most useful and most generally applicable, and certainly the safest, being some of the many forms of bougies, corresponding in sizes to the male bougies. There are two main types, the one of metal, with a large curve, suitable for passing on the finger, without a speculum if preferred; and the other shorter and less curved, made of wood, horn, or vulcanite, for use when the uterus is drawn down. Those of Matthews Duncan, or Edis, are the best of the metal bougies; those of Hegar or Leiter of the shorter types. Great care must be employed in using these dilators, no undue force being used, and the direction of the canal must be known. We must avoid carrying septic material from the vagina up into the uterus, as endometritis may be set up, with its sequelæ. To avoid this, the vagina should be syringed by the nurse with an antiseptic lotion, or mopped out by the physician with cotton wool, dipped in liquor hydrarg. perchlor., B.P.

To cure *spasmodic dysmenorrhœa* the dilatation required is slight, the passage of bougies up to No. 12 usually being sufficient. By avoiding the use of a speculum, and using the metal bougies, previously warmed and oiled, these can be passed in spite of the existence of an ordinary hymen without damage, the patient lying on her side. If the vagina be capacious, and assistance is at hand, it saves time to draw down the womb and pass the bougies through a Sim's duck-bill speculum, or a Neugebauer's, or Barnes', or Meadow's, if the patient be on her back. The bougies may be passed successively at the same sitting, or on several consecutive days. A larger size should not be passed till either the pain has lessened, or, if the patient be anæsthetized, till the grip of the bougie, then in utero, has become loosened. Whichever plan be adopted, the process should be completed about three days before the expected period, which will probably be anticipated. It is advisable to paint the endometrium with lin. iodi., or pure carbolic acid, after the dilatation, and to place a glycerized tampon in the vagina up against the cervix.

In *obstructive dysmenorrhœa* dilatation must be carried further, and more caution must be used. The patient may need preparation by rest, purgation, hot vaginal iodized douches, and, if congestion be present, blood should be drawn from the cervix, and glycerine tampons inserted for the week previous. Here Leiter's or Hegar's dilators up to

No. 18 or 20 may be required, and an anæsthetic given, though cocaine (Head Moore's cones) will make the pain almost bearable. Rest in bed, with daily hot vaginal douches, is necessary for at least a week afterwards. This treatment will almost always cure membranous dysmenorrhœa, though the condition may return and the dilatation be again necessary, but if pregnancy supervene the cure is usually complete. In some cases an intra-uterine stem may be necessary to prevent contraction recurring.

Treatment of Displacement.—I am here dealing with displacements only in so far as they are the causation of dysmenorrhœa. I have shown that a flexion may exist and yet not be the cause sought for—a less obvious condition being the real cause. We must therefore examine every case carefully, and not be satisfied with a condition which may have been present from foetal life. If we find a true obstruction at the point of *supra-vaginal* flexion it must be dealt with as an ordinary stenosis, by dilatation, but the tendency to recurrence is much greater when the obstruction occurs at the point of flexion than elsewhere, so that it *may* be necessary to introduce an intra-uterine stem for a short period to allow free exit to the uterine contents, by keeping the canal patent and the uterus at its normal curve. Versions *per se* never cause true obstruction. Intra-uterine stems must be used with great caution. Formerly, their method of introduction, or rather absence of method, was the cause of frequent accidents, or even death, so that this generation is only now awaking from the dread of their very name. Thus they used to be forcibly introduced in the out-patient department at our hospitals, the patient then walking home, metritis and peri-uterine inflammation being often the result. Till recently, again, it was thought necessary to first dilate with sponge or laminaria tents, often thus provoking septicæmia, and not so very rarely pelvic abscess, or even death. Now we consider both these methods bad, and insist upon a strict preparatory treatment.

The use of stem pessaries must be rigorously excluded in all cases of metritis or peri-uterine inflammation, either present or recent, as well as in every case of endometritis. We choose the time when there is least pelvic hyperæmia, which is about ten days after a period is over. We enjoin rest in bed for a day or two beforehand, with free purgation, and we relieve any congestion by means of glycerine tampons, hot vaginal douches, and scarifying the cervix in some cases. At the time of introduction we purify the vagina, straighten the uterine canal by drawing down the cervix, and dilate it by passing a series of warmed and oiled bougies until we are sure the selected stem will easily pass; we then apply carbolic acid to the endometrium on a Playfair's probe to disinfect the uterine cavity and lessen its sensibility, and then gently introduce the stem on a suitable holder, taking care that the length of the stem is at least one-third of an inch less than the total inside length of the uterus, to avoid contact with the tender fundus. Rest in bed must follow for at least a week, and on the sofa till *after* the next period, which is usually anticipated, after which the patient may resume her ordinary occupation, using throughout hot antiseptic vaginal douches.

My favourite stems are simple glass or vulcanite ones, or the compound stems bearing the names of their authors—Meadows, Wynn Williams, or my father's. The choice depends of course upon the condition of the uterus. It should be clearly understood that the use of intra-uterine stems is always a *dernier ressort*; that they are only to be

justified where serious obstructive dysmenorrhœa exists, which has recurred after ordinary dilatation, or in those rare cases of grave constitutional disturbance arising from acute flexions with prolapse, or in a few cases of ante flexion with sterility, where every other method of treatment has failed.

With these limitations and precautions I have not had any anxiety in the use of these stems, rarely having the least rise of temperature even, and have succeeded in curing cases where other measures have failed.

Inflammatory Dysmenorrhœa.—Want of time prevents me dwelling at all upon the treatment of pelvic inflammatory states beyond pointing out the necessity of absolute local and general rest, without which all treatment would fail.

Congestive Dysmenorrhœa.—I have already alluded to the cure of congestion of the uterus when due to, or aggravated by, prolapsus, by means of vaginal pessaries. Many cases, however, do not need these. Rest alone will cure some. Astringent lotion, such as tinc. iodi, tannin, sulphate of zinc, alum, using of each 3 i. to the O i. of hot (105° F.) water, will often both relieve the congestion and give tone to the vaginal walls.

Of pessaries the best is a Hodge Lever pessary, which can be moulded to fit almost every condition when made of soft wire and india-rubber, and a more permanent vulcanite, or hollow metal one, can be made from that as a copy. Rings of all kinds should be avoided if possible. Vaginal douches should be used with a syphon apparatus, the patient being recumbent. Scarifying, or leeching the cervix, and glycerine tampons are indicated in bad cases, and I have seen much good arise from the use of Leiter's tubes with hot (120° F.) water passing through them, and placed along the lower dorsal and lumbar spines for several hours daily.

Medicinal treatment should be directed towards acting on distant excretory organs—skin, liver, bowels, kidneys—and ergot should be given to drive the excess of blood from the uterus. Small doses of hydrarg. perchlor. often act well. The following pill, to be given between the periods, often relieves pelvic congestion: R—Ergotin, gr. i.; ext. aloes aquos., gr. $\frac{1}{4}$ – $\frac{1}{2}$; ext. nux vom., gr. $\frac{1}{2}$; hydrarg. perchlor., gr. $\frac{1}{20}$; ext. bellad., gr. $\frac{1}{3}$. M fiat pil. bis die sum; with Hunyadi Janos early in the morning. I cannot here allude to the treatment of fibroid, especially as Apostoli's method is still *sub judice*.

In conclusion, it will of course be understood that while for convenience I have grouped cases of dysmenorrhœa under these heads, it is exceptional to find any one case so clearly defined as to be treated solely from one point of view. Long-standing cases, functional at first, tend surely to hypertrophic, or congestive changes; and cases may be of such antiquity, or be so complicated, as almost to baffle us. Let us, however, never despair; let us try to find the real starting-point of everything, and let us do nothing rashly; but let us act patiently, and with that confidence in our own treatment which inspires confidence on the patient's part towards us, and we shall rarely fail to cure those under our care.

SKETCH OF THE CORONER'S COURT, AND ITS PRINCIPAL RELATIONS TO THE MEDICAL PROFESSION.¹

BY JOHN EATON, M.D.

HAVING observed in the medical journals, of the past fourteen years or so, the frequency of paragraphs regarding coroners, coroners' courts, and inquests, with notes of

inquiry in reference to curious or obscure points in the history, functions, and jurisdiction of coroners' courts, and complaints of the misbehaviour and incompetency of certain coroners, their occasional discourtesy to medical witnesses, misleading remarks to juries, the frequency with which unnecessary inquests are held, and the frequently irrelevant and absurd verdicts of juries in consequence of skilled medical evidence not having been called, it has occurred to me that a brief sketch of the coroner's court and its present constitution, with an account of its relations to the medical profession, might prove useful and interesting, and might enable us more justly to decide the desirability or not of the office of coroner being confined to the medical profession, or of as many medical men as possible endeavouring to become coroners; and of the reforms which are necessary in order to remove the various anomalies and anachronisms which exist in connection with that ancient, respectable, and important institution—the Coroner's Court.

The task which I have thus undertaken is one which many members of this society are doubtless more able to accomplish, but I hope by attempting it to elicit the opinions of such, and consequently to increase and confirm our knowledge on a subject of very great importance to the medical profession, and to prevent the too-frequent quotation of authorities from interfering with the narrative. I may here mention that the facts of this paper are obtained chiefly from the *British Medical Journal* since 1872, the "Medical Directory" (1887), an article in the "Encyclopædia Britannica" (9th edition), Archbold's "Justice of the Peace" (7th edition, 1875), Sir John Jervis' "On Coroners" (4th edition, 1880), Stephen's "Digest of the Law of Evidence" (4th edition, 1881), the Coroners Act 1887, and other sources which will be indicated as we proceed.

The coroner's court is one of the most venerable of our legal institutions. The exact date of its origin is not known, but it has been in existence for at least a thousand years; and like much of our common law, the office of coroner seems to have been of Saxon origin. According to Sir Edward Coke, sheriffs existed in this country, as officers of the consul, in the time of the Romans, and it has been supposed that the office of coroner may have been established about the same time as that of sheriff, and thus have existed prior to the Saxon period.

Rapin, in his "History of England," notes the similarity of the customs practised in England at the beginning of the 18th century to those that the Anglo-Saxons had practised there, which they had brought with them from the northern countries, and lastly from Germany. And an English historian, Brady, quoted by the same high authority, affirms that until the Norman Conquest the laws of England and Germany were identical. Alfred the Great collected an admirable code of laws, consisting of selections from the judicial laws of the Old Testament, from those that had been enacted by Ina, King of Wessex, and Offa, King of Mercia, in their respective kingdoms, and others of his own, adapted to the circumstances of his people. He was exceedingly anxious to administer justice to his people, and finding that, notwithstanding all his precautions, the rich and powerful were apt to oppress the poor and dependent, he established juries in criminal cases, ordering that in such cases twelve men chosen for that purpose should determine concerning the fact, and that the judge should give sentence according to their verdict. This was evidently equivalent to the establishment of the chief feature of the coroner's court, and doubtless consti-

¹ Read before the West Cumberland Medical Society, at Whitehaven, May 25th, 1887.

tuted at that rude and remote period a considerable safeguard against injustice to those who were accused of crimes. Sir John Jervis in his book "On Coroners," page 2, states that coroners existed in the time of King Alfred, for that king punished with death a judge who had sentenced a party to death upon the coroner's record, without allowing the delinquent liberty to traverse or appeal on the point of law. We find also that coroners, as officers of the realm, are mentioned in a charter, dated A.D. 925, granted by Athelstan, in the first year of his reign to the Monastery of St. John of Beverley, but though the office of coroner was established thus early, according to Stow, they were first appointed for every county in England by statute of Westminster (3 Ed. I.) in 1275.

The coroner is, therefore, a very ancient officer of the Crown in Great Britain, engaged at common law, principally with pleas of the Crown, whose chief duty is to hold and preside over a court of inquiry and record; to ascertain the cause of sudden, mysterious, or violent deaths. From the Statute, *De Officio Coronatoris*, it would seem that coroners had authority to inquire regarding cases of rape, house-breaking, prison breach, and arson; but C. J. Cockburn, in the case of *Regina v. Herford*, says, "that the office of coroner, with reference to felonies, is limited now to cases of homicide on the view of the body," and that decision has now been accepted as law by Lords Coke and Hale, and adopted by C. B. Comyns in his "Digest" (because it had never been exercised since Magna Charta, signed by King John, 15th June, 1215). It is still, however, the duty of a coroner to inquire of any hidden treasure that has been found; and he has power to try on suspicion anyone suspected of having found such treasure; and anyone finding such treasure who fails to make it known to the coroner of the district, through his usual officers, the peace officers of the district, is liable to fine and imprisonment. The duty of the coroner, however, to inquire regarding shipwrecks and treasure trove has been nearly superseded by the provisions of the Merchant Shipping Act, 1854, and clause 44 of the Coroner's Act, 1877, expressly abolishes the jurisdiction as to fish, though the practice was obsolete.

Up till last year the coroners had yet power to inquire of wrecks, of royal fishes—as sturgeons—and of whales, and to secure their value to the Crown. Except in London, where the judgment is given by the recorder, it is his duty yet to be present, under a penalty of fine or imprisonment, at the sheriff's county court, to pronounce sentence of outlawry against anyone who has refused to be amenable, or to abide by the justice of that court which has lawful authority to call him before it, on or before the fifth county court, or day of exaction under the writ. Coroners can also execute process for the sheriff, when the latter is incapacitated by interest in the suit; where there are two sheriffs, the one can, in that case, act for the other; but when a sheriff dies, the under-sheriff, and not the coroner, has power to act until another sheriff is appointed. When coroners are incapacitated by interest or otherwise, *elisors*, appointed by the officers of the court, act for them; but when there are several coroners in the district, those not so interested can act for the others. In all proceedings against the sheriff, the process should be directed to, and executed by, the coroner.

In the reign of Edward III., the office of coroner was considered very high, honourable, and responsible. By the Statute of Westminster, the first (3 Ed. I., c. 10), it was enacted that none should be chosen for the office but

lawful and discreet knights,¹ and in the time of Edward III. there is an instance of a man being removed from the office, because he was merely a merchant. Subsequently, it was deemed sufficient if a man had lands to the value of £20 per annum, which was the amount entitling him to be a knight. Blackstone complains that in his time (1743—1780) the office had changed from its original dignified and honorary character, and had become a paid appointment in the public service. He seemed to think that the coroners of his time were a very mercenary set of men, and had desired to be chosen to the office for the sake of its perquisites, for fees for attendance had been granted by the statute (3 Henry VII., c. 1), of which Sir Edward Coke also complained heavily, though since his time those fees have been much increased. It is interesting to note the deprecatory remarks of such authorities as Coke and Blackstone, merely because fees were accepted for work done, as it is now universally acknowledged that important work ought always to be well paid for, and the coroner, like other public officers, justly receives payment for his services.

Although as the law stands at present, a retired tradesman, an auctioneer, a land agent, a house agent, or other person, with influence to affect the freeholders of the country, may become a coroner. The coroner is generally a qualified legal or medical practitioner. The property qualification has been virtually dispensed with, and the county is liable for any penalties that may be incurred officially by the coroner. The coroner is at present appointed by the freeholders of the county or district assembled in county court, but the possession of the site of a pigsty will confer the right of voting, and the freeholders, as a class, are wholly unqualified to judge of the ability of a man to be a coroner. The office has always been elective, and is held for life, and curiously enough when on the polling day, the sheriff has declared the successful candidate, his decision is practically final and irreversible, even though the sheriff may have admitted votes wrongly.² A coroner, however, vacates his office when he is made sheriff or verderor (the latter being an officer sworn to keep the assize of the Queen's forest, and whose duty is to take care of the *vert* and venison). He may be removed for inability or misbehaviour in his office by the Lord Chancellor, or by the writ, *De Coronatore exonerando*, for sufficient cause assigned as old age, sickness, other business engagements, etc. Under the Municipal Corporation Act,³ borough coroners are still paid by fees, as was the case with county coroners at an early part of the present reign, but by Act 23 and 24, Vic. c. 116, the system of paying county coroners by fees was abolished; and they are now paid by salary out of the county rate, calculated on the average amount of the fees, mileage, and allowances usually received by the coroner for a period of five years, and the calculation is to be revised every five years. The Home Secretary is to decide when the coroner and the justices cannot agree.

¹ Clause 12, Coroners Act, 1887, omits the statutory provisions as to a county coroner being a knight (*see* 3 Ed. I., c. 10), and having other qualification, which are now obsolete.

² *Regina v. Diplock*, 34 J.P., 118; Archibold's "Justice of the Peace," vol. i., p. 391—5.

³ The Corporation and Test Act, passed in 1661, was repealed May, 1828; The Corporation Reform Act, for regulating Municipal Corporations in England and Wales, 5 and 6 William IV., c. 76 (1835), was amended in 1869. Charters of right were first granted in England to various towns by Edward the Confessor (1042), and Henry I. granted Charters in 1100.

Coroners are of four kinds: official coroners, franchise coroners, coroners by election, and borough coroners.

The official coroners are the Lord Chief Justice of the Queen's Bench, and the Judges of the High Court of Justice, who are sovereign coroners, and may in any place in the kingdom exercise the jurisdiction of the coroner, but the Lord Chancellor is *ex-officio* censor of coroners. The Lord Chief Justice, therefore, in his capacity as general coroner of the realm, is liable to be censured, admonished, and deprived of his office, with all its dignity, and with such few emoluments as may attach to it (*British Medical Journal*, vol. 2, 1882, p. 376) by the Lord Chancellor.

Franchise coroners are those within particular liberties, towns-corporate, lordships, manors, universities, and franchises over which the lords or heads of corporations are empowered by charter to act themselves (when they must describe themselves as coroners), or to create their own coroners, and no subject can claim this franchise except by special grant from the crown, but franchise coroners can, by prescription, in many cases appoint a deputy with consent of the lord of the franchise. The mayor of London is by charter coroner of London.

The cinque ports (Dover, Hastings, Hythe, Romney and Sandwich, Winchelsea and Rye), from their great antiquity, have their own coroner.¹ The dean and chapter of Westminster have their own coroner, who by their appointment is coroner for the city and liberty of Westminster. In the stanneries² in Cornwall the wardens are coroners. The Clerk of the Crown still retains the title of Queen's Coroner, and before the passing of the Prisons Act, 1865, he had jurisdiction over matters arising within the Queen's Bench Prison. There are other exclusive jurisdictions and corporations for which coroners are appointed, the principle of such jurisdictions being that of the verge, and that of the admiralty.

The coroner of the verge, or of the royal household, once had exclusive jurisdiction within a circuit of twelve miles round the residence of the court, but is now confined to the actual precincts of the residence of the sovereign, and two hundred yards from those precincts, for the time being. By statute (33 Henry VIII., c. 12), the Lord Steward, or Lord Great Master of the Royal Household, is, *ex-officio*, always coroner of the verge. In some cases the coroner of the county has concurrent jurisdiction with that of the coroner of the verge; as when a person had been killed within the verge of the court, and the king had removed his court before an inquisition had been taken by the coroner of the king's household, it was enacted by the statute *Articuli super cartis* that the coroner of the county and the coroner of the verge must act together. But Clause 29, Coroners Act 1877, subsection 2, removes the ambiguity as to the jurisdiction of the coroner of the queen's household when the death arises in a palace in which the queen is not then abiding; subsections 4 and 9 restrict the jurisdiction of the coroner of the queen's household to the limits of the palace, thus throwing the two hundred yards into the jurisdiction of the county coroner; subsection 3, directing the return of the jury by such officer of the queen's household as may be directed

to summon the same by the warrant of the coroner, is not at present statutory.

The coroners of the Admiralty have exclusive jurisdiction of matters arising on the high seas, and by statute (15 Rich. II., c. 3), the coroners of the Admiralty have now jurisdiction concurrently with the coroners of the county of the death of man and maihem,¹ in great ships hovering on the main streams, in great rivers, *infra primos pontes*.

As we have seen, the statute of Westminster² first (3 Ed. I. c. 10), enacted "that through all shires efficient men shall be chosen to be coroners," and there are many interesting particulars in reference to the office of coroner which we will endeavour to state in as condensed and clear a manner as possible, as we consider them essential as an introduction to the other portions of this paper. Some counties have six, some four, others two, and others only one coroner,² but the Lord Chancellor can issue a writ for the election of one or more coroners, or as is now the practice, the county may, upon the petition of the Justices at Sessions to Her Majesty in Council, be subdivided into districts, and it is important to note that "detached parts of a county, riding, or division, shall be deemed to be within that county, riding, or division of a county by which it is wholly surrounded, or where it is partly surrounded by two or more counties, ridings, or divisions within that one with which it has the longest common boundary."

Borough coroners are those appointed by the council of every borough in England and Wales in which a separate court of Quarter Session is held, and must not be aldermen or councillors of the borough. Coroners are *ex-officio* magistrates and conservators of the Queen's peace; their most important duty is to hold inquests on view of the bodies of any persons slain, or suddenly and mysteriously dead, to ascertain how the death occurred; and if anyone be culpable, to cause the person to be taken, delivered to the sheriff, and committed to gaol. Those concerned not culpable to be bound over to appear as witnesses before the justices. He has also to inquire regarding all deaths that occur in prison; to satisfy the public that the death was from natural causes, and not *per dure gard*, or violence, or ill-treatment in prison. He must also within twenty-four hours after a public execution, in any prison within his jurisdiction, hold an inquest on the body, to ascertain its identity, and whether judgment of death has been duly executed.

When a lunatic dies in an asylum, or licensed house, or under the care of any person, that person must forward to the coroner, within two days of the death, a proper certificate of death, and if the latter thinks that any reasonable suspicion attends the cause and circumstances of death, he must hold an inquest on the body. When an infant under one year of age dies in a house registered under the Infant Life Protection Act, 1872, notice must be given of the death within twenty-four hours to the coroner by the person registered, and if no satisfactory medical certificate is furnished to the coroner, he must hold an inquest.

By the Mines Regulations Act special provisions exist as to coroners' inquests on deaths from accidents or explosions in mines. The coroner can, at once, take evidence as to the identity of the body, and order its

¹ These ports being nearest to France were considered the keys of the kingdom, and were placed under special barons or wardens, whose special jurisdiction was, however, abolished in 1855.

² Courts in Devon and Cornwall for administering justice among the tin miners, confirmed by 33 Ed. I., 1305, regulated by Parliament 1641, and frequently since. A "Stannaries Act" was passed in 1869.

¹ Maihem or mayhem means depriving a man of a member necessary for defence in fight.

² See "Medical Directory," 1887.

interment; but unless the Inspector of Mines for the district, or some person on behalf of the Secretary of State, is present to watch the proceedings, the coroner must adjourn the inquest, so as to be able to give the inspector at least four days' notice in writing of the time and place of holding the adjourned inquest; but if not more than one person has been killed by such an accident or explosion, and the inspector has received not less than forty-eight hours' notice of the time and place of holding the inquest, it will not be imperative to adjourn the inquest, if the majority of the jury think it unnecessary so to adjourn. If, at an inquest at which an inspector is not present, evidence is given of any neglect causing or contributing to the explosion or accident, or of any defect in or about the mine, appearing to the coroner or jury to require a remedy, the coroner shall send to the inspector of the district notice in writing of such neglect or default. It is also the duty of the coroner not to allow any person having an interest in, or employed in, or in management of the mine where the explosion or accident has occurred, to be sworn or to sit on the jury, but such a person may be present at the inquest. I have known a case where it was suggested that the presence of the manager of the mine might intimidate the witnesses, and yet the coroner allowed him to be present, which was only fair, as he might have been personally implicated in the verdict.

(To be continued.)

FROM GENERATION TO GENERATION:

A PRELUDE TO THE STUDY OF HEREDITY.

By R. A. DOUGLAS LITHGOW, LL.D., M.R.C.P. ED., F.S.A.,
F.R.S.L., ETC.

(Continued from page 217.)

General Disorders of Nutrition.—The series of disorders which I now propose to consider may be regarded as entirely constitutional, and, therefore, all the more likely to be hereditary. It must be admitted that there are different types of physiological constitutions manifested among various healthy individuals; yet so elastic and indefinite are the characters by which these are distinguished, that every degree and variety of transitional forms are frequently manifested. In the same way, no hard and fast line of demarcation can be laid down as dividing purely physiological from pathological conditions, and as even health itself is an arbitrary relative condition, so physiological phenomena merge imperceptibly into those which are pathological. In this group of constitutional disorders "the stability of the dynamic equilibrium of the vital processes is different from that which subsists in health—depends immediately upon the morbid change which the vital processes have undergone in regard to their force and direction, and is, therefore, ultimately bound up with the very essence of every constitutional disorder." It is quite possible that an individual suffering from one or other of these nutritive disorders may for a long time appear in excellent health, until, in fact, some critical epoch, or external influence, or some inter-current malady will develop the morbid tendency into a well-marked pathological condition. In the production of these, as in that of other, diseases or disorders, two sets of causes are usually recognised—viz., external or exciting, and internal or predisposing. Of the former we must be careful to exclude, in general terms, those of an infective or toxic

character, from those denominated "autogenetic," which may be said to consist in some deficiency, unsuitableness, or excess of the normal vital stimuli, as light, air, warmth, food, exercise, etc.¹ Of the internal or predisposing causes which influence the development of the general disorders of nutrition, I may mention in the first place, as of most importance, inheritance; then age, sex, physiological constitution, errors of development and pathological processes, and psychical influences. Of these I am more concerned, on the present occasion, with inheritance, the influence of which is so emphatic and unmistakable as to often render all other possible causes as of no account. It should be remembered that hereditary constitutional maladies may be indiscriminately inherited from either parent, but that when both parents have the power of transmitting the same constitutional condition or anomaly, the transmission becomes almost absolutely certain. Heredity is the rule; non-heredity the exception. The exception may be illustrated by the following facts:—The influence of an affected parent may be neutralised or rendered dormant by that of the other one: by atavism or reversional heredity a whole generation may be passed over, the inherited influence reappearing as potently as ever in the next: some members of a generation may be affected, others spared, owing to the influence of one parent being transmitted to certain members, whilst that of the other is transmitted to others, or that of fathers to sons, of mothers to daughters, or of fathers to daughters, and of mothers to sons. As Immermann says: "The parents need not always exhibit visible signs of their constitutional vice at the moment of conception: a general disorder of nutrition which is latent in them is as capable of being transmitted as one that is apparent. The inherited vice often remains latent in the infant, and does not show itself until a later period—till the age at which it showed itself in the parent. Hence, it follows that age as well as sex may favour or oppose the influence of heredity; that it is more correct to speak of the constitutional vice itself, than of its manifestation, as being subject to inheritance." By the general law of heredity is therefore meant, that the most essential qualities of the parents are transmitted to their children, unless neutralised by other internal or external influences, and this law affects alike the domain of physiology and of pathology. Children resemble their parents, not, however, 'as stiff copies of equally rigid prototypes, but as variable magnitudes whose variations obey the same type.' From this it will be seen that it is the entire physical life which is reproduced—the constitutions of the parents, with all their natural changes, which are generally transmitted: and so, even as a normal constitution is transmitted, so is a constitutional vice repeated in the offspring.²

I shall now consider some of these general disorders of nutrition with regard to their inheritance.

Anæmia.—Different persons have relatively unequal quantities of blood, and different persons are differentiated still further from each other by relative differences in the state of physical nutrition. Healthy constitutions may, therefore, be divided into those which are rich in blood or vigorous, and those which are spanæmic or feeble, according to these two sets of phenomena. When it is remembered that an individual constitution is the result of heredity, and the influences of his environment during foetal and extra-uterine existence, it will readily be con-

¹ Immermann.

² Ziemssen.

ceded that certain forms or types of weakly, feeble constitutions, which so frequently develop pathological anæmia, are often inherited from either or both parents. The fact of whole families being characterised by a predisposition to anæmia in its many forms is proof enough. How frequently is this the case! And there cannot be a shadow of a doubt that whether we regard "the average power of renewing the constituents of the blood, the average rapidity with which they are utilised in nutrition and growth, and finally, the average amount of the blood store (as the resultant of the first two elements)," they are singly and collectively subject to the influence of heredity. The exciting causes of anæmia are numerous and important; but whether we regard the affection itself in its physiological or pathological aspect, we find in one as in the other almost invariably a predisposition which is inherited more or less, in differing degrees, and that the physiological predisposition will very readily become developed into the pathological.

Chlorosis.—To the influence of certain predisposing causes inherent in the patient's constitution we must trace the source of chlorosis; and these are principally—sex, age, and heredity, which have the greatest share in its development. Sex and age are, in this affection, of pre-eminent importance, inasmuch as no combination of causes from which these are omitted are competent to develop it. In fact, youth and the female sex are indispensably necessary. With regard to age, chlorosis usually affects young girls between the ages of fourteen and twenty-four, during the time when sexual evolution occurs. Of no less importance, however, is the influence of heredity, as an inherited predisposition must be admitted to exist in many, if not the majority of cases. Moreover, the heredity of chlorosis may be taken as an example of certain inherited affections which usually manifest themselves at the same period of life at which they affected parents or ancestors, and which have been explained on the hypothesis of latent characteristics contained in the individual in the germ state, and which come to light only under definite conditions, and at some particular point of his development, and this particular moment corresponding with a similar moment in the progenitors. Hereditary diseases are, in fact, good instances of heredity at corresponding periods. Thus chorea, which usually makes its appearance in childhood, chlorosis in youth, consumption in middle age, gout in old age, are naturally hereditary in the same periods. With regard to the inherited tendency to chlorosis, the disease is often found breaking out in the majority of, or in all, the female members of a family from one generation to another, oft repeated, and at corresponding periods of life, and this independent of the external circumstances amid which they may have been brought up. Previous to the development of the chlorotic attack, predisposed girls have usually manifested anæmia, and functional irritability of the nervous system, but not invariably, as the attacks have been known to occur unexpectedly in seemingly robust and healthy girls. In whatever way produced, however, and under whatever circumstances, there is in the generality of, if not in all cases, a predisposition which is potently and emphatically hereditary.

Progressive Pernicious Anæmia.—I only allude to this rare and mysterious affection in order to make the list of affections now under discussion as complete as possible. Unfortunately, so little is known as to the etiology or pathology of this morbid condition that I am unable to furnish any evidence as to whether it can be said to be

hereditary or not. Closely allied *in kind* to ordinary idiopathic or symptomatic anæmia and severe chlorosis, it yet differs materially from either in degree, and is characterised by the so-called "anæmic fever" of Biermer, which, *cæteris paribus*, may be regarded as, to some extent, pathognomonic. Frequently associated with pregnancy, this almost invariably fatal condition sometimes occurs as a complication during ordinary anæmia, but the causes of such complication are completely unknown—as, indeed, is almost everything concerning either its etiology or pathology. At the same time, as it is closely allied to anæmia and chlorosis—which, as we have seen, are both hereditary—I cannot abandon the idea that in some cases, at least, there is an hereditary element in its production; there can, at any rate, be no effect without a cause, and as the causes of disease are either inherited or acquired, I shall at least maintain the hypothesis of heredity, until it can be proved that this mysterious condition is dependent entirely upon external circumstances for its causation.

Corpulence or Obesity.—It must be admitted that a predisposition to this condition is generally either inherited or congenital, and this despite all other causes that can be assigned. Those who are predisposed will become fat under any circumstances, and in any rank or condition of life. Like most hereditary constitutional anomalies, its transmission consists in a tendency only, and it may also be included amongst those affections which occur at corresponding periods of life. Thus it may occur during infancy, or not until the fortieth year or thereabouts, and later. It has not yet been determined whether sex has any influence on the hereditariness of this affection, or whether the male or female parent has most to do with the transmission of the tendency. It is more than probable, however, that the predisposition more frequently descends from and to the same sex—viz., from father to son, and from mother to daughter.

Immermann, in discussing the peculiarities of constitution upon which the inherited corpulence can depend, enumerates the following—viz., hereditary differences in the rapidity of blood formation, dependent upon the new growth of red corpuscles; hereditary differences in the trophic and plastic energy of the other tissues of the body; and hereditary differences in the quantity, function, and proliferating capacity of the fat-carrying connective tissue and its vascular apparatus. The foregoing are some of the conditions which on the one hand influence the extent of the tendency to fat-production; and, on the other hand, possibly or certainly, come under the influence of the hereditary principle. Thus far Immermann analyses the constitutional peculiarities on which, in a pathological sense, corpulence depends; but it will be seen that they are all hereditary, and this is the main point for which I am contending. There cannot, indeed, be any doubt that obesity is a condition, a tendency to which is unquestionably hereditary, and that it characterises families for successive generations *malgre* many systems of treatment and innumerable nostrums, notwithstanding which *natura non nisi parendo vincitur!*

Scrofulosis.—However great the temptation, I have no intention of entering here into a discussion of the innumerable theories propounded from time to time as to the etiology and pathology of scrofula, and its relation to tuberculosis, but shall content myself by observing, in the words of Dr. H. G. Sutton, that "A strumous constitution produces phthisis; scrofula and phthisis are inseparable." Regarding tuberculosis or scrofulosis as a constitutional

disease, it is now universally acknowledged to be hereditary in its origin. Pathologists are divided in their opinions as to whether the disease itself, or a predisposition to it, is inherited; and, notwithstanding the fact that tubercle is often actually congenital, I am inclined to believe, with Niemeyer and his school, that as a rule, only a constitutional debility is transmitted, with a tendency to low forms of inflammation, the products of which rapidly become caseous, and thus lead to tubercle. My own opinion is that a pre-existing condition of scrofula is, in the majority of cases, necessary for the development of tubercle, although what is recognised as scrofulous does not always attain a distinctly tubercular condition. In tubercular as in scrofulous cases, there will usually be found a predisposing as well as an exciting cause—the former being hereditary, the latter acquired; and the higher the degree of hereditary predisposition, the less need there will be for an exciting cause.

Following closely the definitions of Virchow and Billroth, Birch-Hirschfeld thus defines scrofulosis:—A constitutional anomaly which shows itself by changes, partly of an inflammatory, partly of a hyperlastic nature, excited in the tissues by a comparatively slight noxious influence—changes which are endowed with insufficient recuperative power, and are therefore prone to lapse into regressive metamorphosis, and following thereupon, into local tuberculosis. Virchow ascribes scrofulosis to “a certain weakness or incompleteness in the structure of the lymphatic glandular apparatus,” and accepting this theory as far as it goes, we should remember that pathology furnishes us with many proofs as to the dependence of weakness of certain systems and organs on a hereditary predisposition. Thus hæmophilia furnishes an example of inherited weakness in the circulatory apparatus. Many other instances might be mentioned.

Of the causes which give rise to scrofulous constitutions—apart from anatomical and physiological conditions, concerning which nothing is definitely settled—the most important, and that most materially supported by experience, is hereditary transmission. Undoubtedly various forms of scrofulous as of tubercular disease run in families. Every practitioner must be cognisant of the fact that the parents of scrofulous children were themselves, in many instances, also scrofulous in their early age, and that phthisical parents very frequently generate scrofulous children. Although statistics may not count for much, yet Lebert was able to prove hereditary transmission in one-third of eighty-eight cases. Balman ascertained that among 141 scrofulous patients nine had lost the father, and eleven the mother, of tuberculosis; while thirty cases of tuberculosis had occurred in near or distant relatives of the rest.¹ It must therefore be conceded that from first to last, amid all its sources and varieties, amid all its developments and retrogressions, in whatever form it may assume, amid all its degrees and complications, heredity is the prime factor in the production of scrofulosis, as it is also in tuberculosis.

Diabetes Mellitus.—But a few decades ago, anyone who would have ventured to include heredity as a predisposing cause of this affection would have probably been treated with ridicule. Since, however, greater attention has been directed to the matter in more recent times, the result of constantly accumulating experience is undoubted and increasing testimony in regard to the hereditary character of

diabetes. Not only have several of the brothers and sisters in certain families become diabetic, but instances are recorded where every child has been the subject of this disease. Moreover, it has been frequently observed that parents, or grandparents, suffering from the disease, have transmitted a predisposition to their children and grandchildren respectively; nay, more, cases have frequently occurred even among the collateral and more distant relatives of diabetics. I feel assured that time and increased experience are alone wanting to substantiate the views held in the foregoing pages as to the influence of heredity in the production and development of morbid conditions generally, and for the reasons assigned—viz., that the inheritance of physiological and psychological peculiarities necessitates the inheritance of those which are pathological.

Epilepsy, mental affections,² and other diseases of the nervous system are often intimately associated with diabetes, and this connection is also, in almost every case, due to hereditary predisposition. Cases showing the coexistence of epilepsy, melancholia, etc., are recorded by Seegen, Zimmer, Schmitz, and other authorities. Among the near blood relations of a diabetic patient Langiewicz found epilepsy in seven. One of Griesinger's patients had had epileptic seizures in childhood, and all the brothers and sisters had suffered, or were suffering, in the same way. A case is recorded by Lockhart Clarke, in Beale's *Archives of Medicine*, in which diabetes occurred in an epileptic who died of cerebral softening.

As to the heredity of diabetes itself, many cases are recorded by P. Frank, Blumenbach, Brisbane, Prout, Pavy, Dickinson, and Senator, and Marsh records the case of a family in which the disease was transmitted even to the fourth generation. From 1868 to 1874 R. Schmitz was enabled to positively affirm the influence of heredity in 22 out of 104 cases.³

Diabetes Insipidus is also undoubtedly hereditary, and like the mellitic affection is frequently associated with the neuropathic predisposition. An hereditary association has also been observed between the insipid and mellitic variety. Thus Trousseau, Reith, and Seegen report cases in which the grandfather had the mellitic and the granddaughter the insipid form; a father and son had the mellitic and a daughter the insipid form, and a son had diabetes mellitus whose father had suffered from diabetes insipidus. The most remarkable instance of hereditary predisposition is that recorded by Lacombe, in which, out of one family a mother, three sons, and a daughter were attacked by the insipid form of diabetes, besides the brother of the mother and his children. Other interesting and less startling cases are reported by Lancereaux, Deebray, Reith, Desgranges and Addinel Hewson.

Having thus glanced rapidly at the principal general disorders of nutrition, it will be seen that heredity has a large share in their production; and although in some instances the testimony recorded may be less satisfactory than in others, yet I firmly believe that in the future, and probably before long, increased experience will not only attest the views I have enunciated, but will throw the light of science over that which may now appear to be vague and hypothetical.

(To be continued.)

¹ Ziemssen.

² Senator.

Special Articles.

HEALTH RESORTS OF THE WORLD.

XX.—NOTES ON MADEIRA AND THE CANARY ISLES.

BY ROBERT R. RENTOUL, M.D.

(Continued from page 223).

THE drives and rides about Las Palmas are very fine. Ladies should take their habits, and saddles with good girths, as the Spanish saddles, for both men and women, are far from comfortable. A light waterproof will also be found useful, for sometimes the rain comes down suddenly, although generally it rains here during the night. The scale of charges for the various drives is posted up at the hotel, but the visitor is not bound to accept these, as he can make his own arrangements. One may engage a coach by the week. However, the three-horse coaches cost only about two to three dollars (8s. to 12s.) a day. These carry five persons comfortably, and the cost, divided among so many, amounts to a very small sum. The horses are not very good, and the drivers will, if permitted, use the whip too freely. There are no hammocks or carros here. One wonders, when will hotel enterprise give the visitor the opportunity of having a camel ride. There are a great number of these animals in the islands, especially at Lanzarote, where a camel costs about two and a half pesetas (about 2s. 1d.) a day. Several of the drives and rides may be mentioned:

1. *That to the Isleta, Lighthouse, and Bay of Confital.*—On the way down towards the isthmus and port we pass, on the sea-side, the saline springs of Santa Catalina. A French doctor has written a pamphlet on this water, and gives an analysis. It tastes remarkably like sea-water. The baths are said to be useful for skin affections. Further on is an old Spanish fort, built during the conquest of this island. On the town side the beach is good, while the sea-breeze is fresh and invigorating. Here many invalids, residing at the hotel, drive down each morning, sit for some hours, and have their "sun-bath." They leave their chairs at the little fielato or custom's house, where all passers-by—either on foot or in coach—are stopped, so as to find out if they have any goods on which duty can be levied. The public conveyances, or street coaches drive to and from the fort, and walk about looking for "fares." Their charge up or down is half a peseta (5d.), but they are not comfortable, although one may run down for the "sun-bath" in one. Near to the castle or fort of Santa Catalina, the telegraph cable comes on shore. About here the facilities for bathing are fair; some, however, prefer to bathe off the different moles. The temperature of the sea-water is about 65° F. There are no sharks. Having inspected these points of interest, and driven on to the isthmus, the coach turns off the main road to the left, and follows the road by the shore.

Here we left the coach and followed a narrow path along the cliffs. We passed the Guancho cemetery on our right, and further on, descend on the flat sands; and from here, on the face of the cliffs, some Guancho caves—the houses of the earth dwellers—are seen. It is a steep climb up to these, and the invalid had better not attempt it. Further on the path leads to Confital Point, near to which are the Salt Works. The salt water is pumped into pans, while the hot sun evaporates the liquid. It is said to be too coarse for table use. There is one other salt works at the south end of the island. The view of the Bay of Confital, with the

opposite cliffs, and the curving strand, is very grand; and especially so when the wind is blowing in, when the waves and surf equal anything of its kind seen along our own coast. On the same, or another day, the lighthouse may be visited, or the new pier examined. When the latter is completed there will be a fine harbour; at present, when the wind is high and the sea rough, ships have to anchor in Confital Bay. I think visitors scarcely appreciate this part of the island sufficiently. There is little or no climbing, so it suits invalids admirably.

2. *The Drive or Ride to Telde.*—This takes us through another part of the town. While we advance, the English cemetery is passed on the right, and to the left, but further off the road, is that of the Spaniards. The castle of San Cristobol is seen, and then we come to the tunnel, which is a good piece of work, the passage having been cut through the solid rock. On its town side is a little bay—a good place for having lunch. The rocks on the land side of the road are high and steep. Beyond is the village of Ginamaris, and finally Telde is reached. The public coach runs from Las Palmas to this town. Further on are the towns of Tugenio and Aguimes, while on a line, at right angles to the former, is the Punta de Gando, near which the Spanish steamer Alphonso struck, and from whose hold divers recovered some chests of gold.

On all these excursions Mr. Quiney supplies the lunch free of extra charge. This is put in a basket, and the driver of the coach is generally obliging, and carries it to the spot selected for lunching. Claret, milk, beer, and other beverages are charged for as usual. The visitor will find a knowledge of Spanish very useful. As a rule the coach drivers don't understand a word of English; consequently, if one unacquainted with Spanish wishes to gain any information from him about points of interest, he is quite useless. The Spanish language is easily learned; if one knows thoroughly the first fifty or eighty lessons in Orlandorf, he will get on very well. The "key" to this grammar will help during self-instruction. Bustamente's English and Spanish dictionary, taken about with one, will supply the necessary words when memory fails.

3. *To Atalaya and the Caldera.*—This is a most enjoyable drive. The road leads through Tarifa. Beyond this, and to the right-hand side of the road, is a beautiful spot, called the Glen of Laurels. It is reached by descending a rather steep path. A stream runs through it; this, with the grass and the shade of the tall laurels, making a favourite resort for picnic parties. Having visited this spot, we drove along until the point is reached where the road to Atalaya leads off. This latter is too narrow and rough for driving, therefore, when about to make this excursion, it is desirable to send on donkeys from Las Palmas. Of course, the entire trip may be done on horseback. The ride from the main road to Atalaya takes about thirty minutes. This cave village is placed on the side of a high hill, and from this a panoramic view may be had. Here the people live in caves. They are occupied in making pottery of a coarse kind—one woman completing a large basin while we waited. This, when dried in the sun, is put into a oven when it is fired. Near to the village is a wine shop, where the grape juice is both made and sold.

After returning to the main road the coach drives back a little on the way to Las Palmas, and then turns off to the right, here taking the road to the Caldera. It is a fairly long climb from the foot to the Peak, which is marked on the

Admiralty chart as 1850 feet above the sea level. The view from here, especially of the coast line, is good, while some "natural glass," and other products of volcanic origin, may be picked up. Having climbed the peak, it is well to go down into the Caldera. A small farm is seen at the bottom. Here also is a spring, some fruit trees, and other farm produce. Perhaps some will find that it is well to devote one day to Atalaya, and another to the Caldera, thereby avoiding fatigue and the cold evening air of the mountains. We followed the latter plan.

4. *Agaité and its Mineral Springs.*—To make this trip, either by coach or horseback, one must start about 7 or 8 a.m.; or the public coach to Arucas may convey us to the latter town, having previously ordered that horses be there waiting. Soon the village of Tamaraceite is passed. It should be mentioned that there is a fonda (hotel) at Arucas. The next town is Guia, a distance of about five hours drive from Las Palmas. Here there is a small hotel where the visitor, on the way to Agaité, will sleep at night. Next morning Galdar, its peak and caves, should be visited. After this a start is made for Agaité, and having seen the objects of interest here, the return is made to Guia the same evening. A public coach now runs from Arucas to Guia. The mineral waters of Agaité are chalybeate, and have a temperature of about 77° F. These are highly carbonised, and, according to P. R. Ogle, F.C.S., contain carbonate of iron, lime, magnesia, soda, and silica. There are about 10.0 grs. per gallon of iron. Here there are also bath sheds and baths. What a pity this water is not bottled and sold at the hotels. Agaité is thirty-two miles from Las Palmas, so it is rather a long trip. Some only go the length of Arucas, lunch there, and return in time for dinner.

5. *To Fergus.*—This makes a good day's ride or drive. Starting early in the morning one passes through Arucas, when, after a run of three and a half hours, we arrive at Fergus. There is a fonda here at which a meal, having been ordered the day before, may be had. The waters and baths of Fergus are considered to be beneficial for rheumatism and skin affections. One may either stay in this place or at Arucas all night, or chance a late drive back to Las Palmas. Mr. Quiney has some of this water at his hotel. It tastes something like Apollinaris, contains some lime, magnesia, and soda, while it is slightly aerated. It is, however, badly bottled and wired; but if it were properly treated in the latter respect it would make a fair table beverage. Fergus and Agaité, being at a considerable elevation, are pleasantly cool during the hot summer months. Perhaps in a few years—if the Canary Isles continue to grow in public estimation—good hotels will be established at these places.

6. Another drive is that to Tenor, where there is a church, mineral spring, and convent, as well as the Bishop's Palace. The Bishop of these islands has his head-quarters at Grand Canary. At evening hours he is often seen walking along the road towards Telde, when he gives the passer-by his benediction, a compliment returned by visitors by their lifting their hats.

7. *San Mateo and San Brigada.*—The tobacco factory at the latter place may be visited, and a purchase made. The growth of the tobacco is progressing in these islands. The cigars are usually smoked when green, and the result is that they so irritate the throat as to cause inflammation and perhaps ulceration. San Mateo is celebrated for its chestnuts, while beyond it are some snow wells. In these various rides

or drives a guide need not be taken; but if the visitor wishes to visit the interior of the island, taking his camp and camera with him, a guide will be necessary.

Who should go to the Canary Isles?—This is a question somewhat difficult to answer, as sufficient experience has not yet accumulated. The temperature of these islands, taken at the sea level, is almost uniform, therefore the invalid may move about from one place to another. There are no sudden variations of temperature, although I am told that a chill is likely to be noticed at about 4 to 4-30 p.m. Dr. M. Douglas—to whom the credit of bringing Las Palmas before the medical world, and so through them to their patients—has given the mean lowest temperatures for November, December, January, and February, as 61.0°, 56.1°, 55.6°, and 55.1° F., while the mean daily range for the same periods was 9.7°, 11.0°, 10.4°, and 10.8° F. Occasional showers of rain may fall, this being followed by a brighter sunshine, and a purer atmosphere. The air outside the town is very pure and rarefied, each angle and line of the buildings coming out distinctly and well-defined—an important feature in any atmosphere. There is no smoke to contaminate it, while, during the night, the dew-fall is almost altogether absent. That the climate is good, and the soil productive, may be noted by the fact that the labourer takes three crops off the same piece of land during the twelve months; and also by observing the many delicate flowers which grow outside, as well as the many fruits. Canary birds are occasionally seen in their greenish-yellow plumage, which turns to yellow in captivity. That great class of people who are neither well or ill, but who must winter out of England, will find this a genial climate, returning home about May or June. So will the business man, worried by anxiety, while the cable will keep him informed on any urgent subject. Those suffering from chronic rheumatism, and such like pains, will derive considerable relief. The patient, convalescing from an acute illness, will find the not too bracing sea voyage of seven days out do great good; while the sufferer from consumption will find that the air is warm and sedative, and his cough much less troublesome. Lastly, the tourist will thoroughly enjoy a ramble through these interesting islands. Houses may be taken by the month, the rent of these varying from £3 to £6 (per month). Some prefer to live this way, especially those who have large families. Servants' wages are low, ranging about one peseta per day. They are not, however, bound to give a month's notice before leaving; the result is they may march off when a dinner is being cooked. However, this may prevent ebullitions of temper on the part of the employer to the employed! Almost all foods may be obtained at the English shops, such as the stores of the African Trading Co., and it may be stated generally, that all necessary articles of food are cheaper here than in England. Of course, a visitor will take an Etna, an india-rubber bottle, some preserved soups, and beef extracts. Silver's soups, with fire-wood attached beneath, all ready for lighting, will be found useful by those who take trips into the country, as the food of the Spanish fonda may not be appreciated. One may take a good chart of the island, a good compass, one or two thermometers, and a barometer, if they take any interest in recording temperature, etc.

There are several English physicians, Drs. Cockburn, Fernandez, and Vines. Dr. Don Gregorio Chil is the leading Spanish medical man. British doctors are not permitted to sign death certificates, and the result is that

when an English person may be about to die, a Spanish physician has to be called in. This, however, may in time be rectified, as an English doctor by studying at Madrid may take out the degree of that university. The old barber-surgeons are not yet extinct at Las Palmas. Generally, there is a clergyman at the hotel, so that Church services are held each Sunday at the British Consulate. I believe, however, that an effort is being made to establish one permanently here. The coinage at Las Palmas gives a little trouble at first, but remember a Spanish dollar equals four shillings; a tostone (with two pillars), one shilling; a peseta equals tenpence; a real, twopence halfpenny; and five centimos equal one halfpenny. Many of these are again subdivided into half-pesetas, etc.

It would not be altogether honest if one—after speaking of the advantages of a place—failed to notice its disadvantages. For instance, the mosquitoes are sometimes troublesome, and it has been lately stated that they may be the means of conveying, through the puncture made by them, the active material which may give rise to future trouble. If, however, a good net be used, and a search made for the mosquitoes before going to bed, and if the hands and face be bathed with water, with which a little carbolic acid has been added—just enough to give a taste to the water, before going to bed, little or no inconvenience will come. The net may be also sprayed with water and carbolic. Another unpleasant feature of all the islands—Madeira included—is that fully eighty per cent. of the visitors suffer from diarrhoea. Fortunately, it may pass away in a few days, but some have been so tormented that they have had to leave. For affording such a change, one might hope that a few days at Agaite or Fergus would effect a cure. It is not known what is the cause—water, wine, fruit, and impure air, each and all being blamed. At all health resorts the visitor will avoid crowded rooms, for consumptives seem to think there is a virtue in their inhaling warm impure air. Big hotels for such invalids are, in reality, consumptive hospitals. The Spaniards have a strong objection to nurse consumptive patients, and burn all bedding, clothes, and furniture belonging to the deceased patient.

Hotel accommodation will slowly go on improving as owners continue to derive a profit on their investment. It is to be hoped that a rush of prosperity and success will not make them blind to faults, but that they will take them to heart, and remove all sources of irritation, for Las Palmas is a place of pleasure as well as a health resort. Life here might be made far more enjoyable, and with only a little extra expenditure—and this not on the part of the hotel keepers. Sound practical use might be made of the Agaite and Fergus waters. Hotel proprietors might contract with the military authorities, so that their regimental band would play in the plaza in front of the hotel three times weekly. See the fruitful efforts made at various continental resorts—Carlsbad, for instance. There, there are two taxes put on visitors—the “cure tax” and the “music tax.” The former varies with the social status of the visitor, and ranges from ten to twelve florins, while the latter ranges from eight to ten. The tax for the reading and smoking rooms is two florins per month. And the result is, that in the matter of music, their band of forty-eight performers is one of the best in Europe. Las Palmas should also have an Ice and Aerated water company. It seems strange that in none of these islands is there an Ice company, and that a bottle of soda water costs sixpence. Perhaps chronic invalids, as a class,

do not spend as much money as others; and I suppose it was a feeling born of this thought that prompted an hotel manager to say he “preferred tourists, because they had more money to spend, and because they drank more liquor!” There are no hot-air, or vapour baths.

Grand Canary is in touch with Liverpool, London, Plymouth, Hamburg, and Cadiz. The British and African S.S. Company run steamers weekly, while Forwood's boats leave London monthly. The New Zealand Shipping Company's steamers call at Santa Cruz, while the Union, and Castle lines call at Madeira; Spanish and German lines also call. The British and African Company have secured the Spanish contract for carrying the mails between the different islands of the Canary group. This company say they are determined to make their service of steamers as comfortable as possible, while the local passenger rates are to be lower than they now are. Being under mail contract, regularity should be guaranteed. At the same time they propose building a sanatorium about half-way between the town and the port. This in itself will add greatly to the attractions of Las Palmas. An American hotel has lately been opened, and a large English hotel is to be built a little way out of the town, between it and the port.

Santa Cruz, Laguna, and Orotava.—Santa Cruz has a population of about 15,000, that of Teneriffe being 105,000, while Grand Canary is 90,000. It is the Capital of the Canary group of islands, and here the Governor and the Captain General reside. The people of Las Palmas are anxious that the Government department should be transferred to their island. There is a fair amount of jealousy between these two places, consequently severe statements must be taken with the traditional “grain of salt.”

The view of Santa Cruz from the sea is pleasing—the town stretching along the shore, the square built and flat roofed houses, generally painted white, the forts, the mole, and the spires of the two cathedrals making a foreground, while the mountains behind the town add their share in completing the picture. The mole, or pier, at which the divers are working, is being pushed to completion, and no doubt in the near future will provide such secure shelter that boating exercise may be added to the attractions of this place. The sea, right into the shore, is deep, so that steamers when anchoring must let go a long length of cable. It is said that the holding ground is superior to that at Las Palmas. Various coal hulks and steamers lie in the bay, while during the thirteen days of our stay a British training squadron, a French convict ship, with 300 convicts bound for the New Hebrides, a German gun boat, and various steamers from New Zealand, Cadiz, and England came in. It was strange to watch the Spaniards towing the cattle from the coasting steamers on to the shore.

It is generally an easy matter to land here, but sometimes there is a heavy swell on. At such times passengers are brought on board, from the boat alongside, in a cane chair, this being heaved up by the winch. This is a very agreeable way of getting on board, and at all times so, for weak invalids. It seems to be quite free from risk and danger. It should be mentioned that the managers of the different hotels come on board and receive any passengers who wish to go with them. They will also look after the luggage. There are no custom duties either here or at Las Palmas, although shippers have some duties to pay.

We landed at the mole and walked to the International Hotel, others going to Camacho's. We found our hotel very comfortable—beds clean, food and attendance good

while the bath room was much better than that generally met with out here. The charges are similar to those at the other island hotels, 8s. and 10s. per day; but we heard that the "International" has been bought out, so that the Telegraph Company may have its head-quarters there. There was not a billiard table. At the mole, one is pointed out a stone in the wall which is said to have been struck by a cannon ball when Nelson attempted to storm this town, and when he received that injury which necessitated the amputation of his arm. Like many other defeats in life, little has been accurately stated of this one. However, he attempted a landing, and his boats parting company, all concentration of action was lost; he having, previous to his retiring, "given" two British flags to the Spaniards, who obligingly keep them in two glass cases at the Church of the Conception, where they may be seen on the side wall above a little altar. At the base of the mole is a bathing house.

Other points of interest are the public square—El Plaza de Constitucion—containing a monument relating to the conquest of the island. A few stone benches are here, while on either side is a French and a German shop. The Casino also looks out on the square. It is a pity this square is so destitute of any adornment, for with some box trees it might be made a comfortable place to rest. The Church of San Francisco, where there is also a college, museum, and library, should be seen. Further on, and behind this church, is a well-shaded, and seated, public garden. Here the band formerly played twice weekly, but during our stay it performed weekly before the Governor's house. The fish and fruit markets are scarcely worth a visit—at least during our time. There is a very good tennis court, belonging chiefly to some English and Spanish gentlemen, at which we had some games. Here we met Dr. Domingues, who gave us some information, and who speaks English. There are two regiments stationed here—one of infantry and the other artillery. Most of the soldiers are a militia, having come from the country to serve their compulsory apprenticeship. This system is, by some, said to be an evil, as the young fellows contract the vices of the town and carry these and its diseases back with them to the villages. The hospital is more modern in its external structure than that at Madeira and Canary. We were kindly shown over it by one of the sisters. Several English sailors had been in it as patients, and felt deeply grateful to the medical staff and nurses for their kindness. If the ordinary Britisher thinks of looking up his fellow countrymen when here, having a chat and leaving a newspaper, or illustrated journal, he will do much to gladden the patient, and thus relieve the loneliness of a stranger in a strange place. The theatre was occupied by a Spanish opera company from Madrid during our stay, the price of admission varying from two to four shillings. There were two *prima donna*. Each, on the night of her benefit, was accompanied home and serenaded by the military band, this going on until about two o'clock in the morning. As the British training squadron, consisting of the *Calypso*, *Rover*, and two other ships, under Commander Markham, was here, the British Consul, Mr. Edwards, gave a ball. Here were also present the officers of the ships and those of the French war vessel, the Governor and Captain General, the various consuls, and many from Orotava, Laguna, and the surrounding neighbourhood. We were also invited, and the dancing was kept up until an "early" hour, all fully appreciating the kindly and dignified courtesy of the Consul and his wife. On such an occasion Britishers feel how pleasant it is to have a Consulate where

all may gather and meet the men who, in their voyages round the world, sustain the dignity of our nation. The casino also gave a ball.

The drives and rides about Santa Cruz may be said to consist of two. That along the shore and out towards the signal station is a pleasant one. This road, which is close to the sea, is not yet completed, but it is said the authorities intend carrying it round the coast to near Laguna. The cliffs, out of which the road is cut, are high, and in some places so loose as to suggest their tumbling down some day. The other excursion is that to Laguna—a pleasant, steady, up-hill drive of about two hours. As Laguna is 2,000 feet above the sea-level, the invalid will find the air sharp and chilly when compared with that of Santa Cruz. Lunch may be had at the hotel here, this having been ordered the day previously.

The climate here is much the same as that at Las Palmas. There are some heavy showers during the winter months, and it is occasionally chilly after sunset. During our stay, we frequently watched the native children run naked along the shore, and then swim about in the water. Such is this beautiful climate in the month of January. The nights are pleasant, one being generally able to sleep with open windows—a blanket, sheets, and counterpane, affording sufficient clothing. Mosquitoes are sometimes troublesome, and during the summer months—July to November—the weather is hot. Residents during the time, however, move up to Laguna, or live in their villas on the hill. We were well supplied with oranges, bananas, guavas, and fresh dates, as well as the prickly pear. The wild pear is small, and may be seen growing along the roadsides. The edible variety is, however, specially cultivated, the cactus on which it grows now being used in cochineal culture, a trade, by the way, which has greatly suffered since the analine dyes have been introduced.

There are—as is usual in these islands—several unpleasant smells. One sewer which empties itself on the beach in the harbour gives off an offensive odour, especially when the tide is out. Here, as at home, there is typhoid and diphtheria. The latter disease cannot be so dangerous as that which occurs in England, as those to whom I spoke to seemed to think little of it. But with a little care and a few sanitary precautions one would think that Santa Cruz might be a rival to Las Palmas. It is, however, more exposed to the sea. The water supplied is good. At our hotel it was run in, once each month, into a large tank below the ground floor; from this it is pumped up to the roof, and distributed through the house. The tanks are cleared out occasionally; and the water, I am told, is allowed to run in and charged for, at the rate of four shillings per hour, until the cistern or tank is full. This system of water supply has given rise to the telling of a story, in which an old lady is represented as writing home to friends and advising them not on any account to come out here, "as the water was supplied at the rate of four shillings an hour!" She forgot to add, or did not know, that one hour's supply, per month, is generally sufficient. This seems to be the usual system of water supply and storage at the different hotels.

Santa Cruz has two papers, while Las Palmas has several (sheets), issued weekly and fortnightly. As we were here on new year's night, we had all the various experiences of guitar playing, singing, and noises. Carnival time is said to be a much more lively occasion.

Different excursions may be made to the neighbouring islands, as to Lauzarote and its capital, Arrecife, where there is a fonda; to Fuerteventura, to Hierro, Gomera, or to Palma, with its caldera and two Spanish hotels. The nearest of these islands is only sixty miles from the African coast. No doubt they will soon be opened out to the travelling public, and hotels established, especially as the British and African Steamship Company are about to put on a local steamer. Messrs. Forwood's boats, the Spanish mail, and the local schooners, make various passages to and from these places at present. The steamers of the New Zealand Shipping Company from London and Plymouth call monthly at Santa Cruz, both on their outward and homeward voyage, the passage from Plymouth generally being made in five days. Their fares are: first class £14, and second class £10, for the single journey.

Laguna and Orotava.—The drive to Orotava from Santa Cruz occupies from five to six hours, and we required all our rugs while on the way. The road is well made, but the brake has so frequently to be put on the three-horse coach, that the grating sound becomes monotonous, while the vibration of the conveyance shakes one considerably. The fact that a conveyance to and from Orotava costs £2 10s., and £1 4s. extra for a luggage cart, must have a tendency to direct the steps of visitors elsewhere. Generally the visitor leaves Santa Cruz at about 10 a.m., stops at Laguna for lunch, and arrives at Orotava about 5 p.m. Others, again, remain all night at Laguna, seeing this ancient-looking town next day, and then go on. Before the hotel was opened, the coach generally drove on to Matauza, which is half-way to Orotava. At this place the coachman stops to have something to eat while he leaves the horses to rest themselves, these poor half-fed brutes being left without any attention whatever. The streets in Laguna, as in Orotava, are many degrees worse than those in Grand Canary and Santa Cruz. Indeed the better plan is to walk through this town and wait outside for the coach. Why the authorities have not carried their splendidly macadamized roads right on through the streets of the towns, instead of using large, somewhat flat stones, it is difficult to say. Entering the various towns here, one's coach is always stopped at the custom-house hut, where a man looks about to see if there be anything contraband. Some heavy taxes are placed on the peasantry. For instance, when they bring eggs, milk, butter, fowl, or such like produce into the town for sale, they are required to pay taxes on these, while if these, remaining unsold, have to be taken home and brought back again, another tax is imposed. On the other hand wines, tobacco, and other luxuries are all allowed to go free. Five shillings of a tax has to be paid on each sheep killed for eating purposes.

Laguna has at one period of its history been the abode of the Spanish nobility; even the fine carving on the outside of many of the houses—many now crumbling to decay—shows this. The hotel is a comfortable and clean little place, its charges ranging from 8s. to 10s. a day. Mr. Renshaw opened it some time ago, while Mr. Clarke now acts as manager. If there were a stove in its hall during the winter months it would prove agreeable to many, for in these islands there is no fireplace in any of the rooms. We visited the different churches, and the old library which contains about 18,000 volumes. The forest of Las Mercedes and the village of Taganana are said to be worthy of a visit.

Generally one gets a good view of the Peak of Teneriffe when driving to Orotava. The Port of Orotava is situated low down, looks to the sea, and faces the north. The hotel here is a very fine building, with well laid out gardens. It unfortunately contains only about fourteen bedrooms, so that the majority of the visitors have to put up at one of the two dependencies or stay at the Spanish hotel or boarding house. It has a free billiard room and a tennis court. The hotel charges vary from 10s. to 15s. per day. At the Zamora we found the food to be far from good; the only fruits we saw on the table were a few oranges and some dried figs. We stayed three days and a half. The Zamora looks out on a small deserted square. There is a church only a few yards from it, and as its bells begin ringing at about six o'clock, it is difficult to sleep after that hour. Visitors here generally visit the Garden of Acclimation going thither, either on foot, or by hammock. The walk along by the sea wall and the cliffs is enjoyable, while the fresh sea breeze is invigorating, and the view of the coast beyond—for miles—is very fine. Coaches or horses may be had for the drives to Icod, where, among other objects of interest, is a dragon tree, and some Guancho caves. Garochico is also often visited. One may also look in at the druggist's shop at the Port, and see his collection of Guancho antiquities, while the mole affords a pleasant place for walking. The temperature of the water ranges from 65° to 67° F., some bathing here or further along the coast. A fine view of the Peak can generally be had before 9 a.m. When the sun shines on its snow-capped summit it is an impressive and magnificent sight. But after 9 a.m. the winds from the sea, laden with moisture, condense on it, thereby enveloping the entire mountain in cloud. These, at the time of our visit, came down the mountain and near to Orotava. This is far from pleasant. It gives a heavy kind of feeling, and has a tendency to depress one. This "cloud parasol," as it has been termed, is not appreciated by many. Indeed, during our visit to these islands there were not a few clouded days. One would like to see some observations regarding the amount of clear sunshine recorded. Those who ascend the Peak take a guide with them. The view at the top is said to be sublime. There the rocks feel hot to the touch, while the sulphur vapour is distinctly perceived.

The climate of Orotava is appreciated by many. The mean temperature for the year is 68.5° F., and the variation during the twelve months does not exceed 18°. The rainfall is 14.7, while according to Dr. Graham it is twenty-nine inches at Madeira. If the Port of Orotava is found to be too hot during the summer months, invalids may reside at the Villa Orotava. This place is about 1,000 feet above the sea-level, and half-an-hour's drive from the Port. October to March is considered to be the best time for visiting this place. The public coach runs from Orotava to Santa Cruz, but few visitors use it.

We arrived back at Liverpool in January, all feeling much better for our trip, and wishing that events had permitted our prolonging our stay. If these islands receive a fair encouragement from the Spanish authorities, from the different steam-ship companies, and from the hotel people, they will continue to receive that large supply of invalids and tourists which has of late set in. The only pity is that Great Britain does not own the islands. Those who do not wish to carry much money about with them may have letters of credit to Messrs. Hamilton, or to Messrs. Miller, or Blandy.

XXI.—DROITWICH.

BY ALFRED J. H. CRESPI, WIMBORNE.

MANY years have passed since, as a very little boy, I first went through Droitwich on my way to Cheltenham, and since then I have generally gone through it from four to twenty times a year, and I must confess that a grimier looking little place, from the railway, it would be hard to find. Fine or wet, bright or gloomy, over the town there hangs a dense canopy of what looks like smoke, but which on more curious inspection is seen to be steam condensing into water. The railway is not the best vantage ground for getting to know the little old town, and greater familiarity corrects the first evil impression. Droitwich may not be beautiful, but there is rich and fertile country near, and it is ancient enough to satisfy the most exacting antiquary; while its salt springs or Wyches are connected with one of the oldest industries in the country.

Salt works existed at Droitwich in the times of the Romans, and ever since their departure the wyches have been yielding their strong brine, and giving employment to successive generations of salters. In the time of the Heptarchy, Kennulph, the kinglet of Mercia, having first cut off the hands and put out the eyes of his brother kinglet, Egbert of Kent, sought to propitiate Heaven by giving ten salt furnaces at Droitwich to the great Church, which even then made Worcester famous, and the temporal church was satisfied, and promised the sinner the pardon of Heaven. Two hundred years later a far worthier wearer of the crown, the unhappy Edwy, Over-lord of All England, tried to purchase the sanction of the Church to his marriage with his second cousin—Elgiva—by giving it five more Droitwich salt furnaces, but this time the Church refused to be gracious, and poor Edwy and the beautiful, though hapless, Elgiva were not allowed to rest in peace till the grave closed over their mangled remains. Salt from Droitwich supplied the Anglo-Saxons with the condiment that gave a pleasant flavour to many an insipid dish, and it is a probable conjecture that Alfred and many of his successors got their salt from the inexhaustible springs of Wich, the name which Droitwich still bears in legal documents. A single powerful brine spring yields a thousand tons of pure salt a week; while the district supplies every year at least two hundred thousand tons of the best salt in the world, and the springs still flow with undiminished prodigality. In his History of Worcestershire, Nash wrote in 1779 that the net salt duties of the Empire then amounted to about £240,000, and of this Droitwich contributed £75,000. In spite of modern discoveries, Droitwich salt has the reputation of being the best and purest in Europe, and the preparation and evaporation of the brine are so simple as to account for the high estimation in which the place has been held for nearly two thousand years. The wyches are in the middle of the town, and rise through beds of new red sandstone and gypsum from a depth of 200 feet. No wonder the Roman Salinæ, and the Saxon Wych, and the more familiar Droitwich, has a population of 4,000, to whom the salt industry is more important than international complications and changes of government.

In that part of England, the prevailing geological formation is the new red sandstone, upper and lower; it stretches for miles round the coal basin of the dingy and unattractive, though interesting town of Dudley. The lower division of the new red sandstone is not of great importance, though in places it contains quarries of a soft

building stone, but the upper division is of incalculable value, and is the inexhaustible store-house of household salt, and to salt we are indebted in great measure for the enjoyment of much of our food, and for the prosperity of many of our chief industries. Three miles to the north-east of Droitwich, at Stoke Prior, where Mr. Corbett, M.P., has extensive and splendid salt works, a shaft has been sunk to a depth of 460 feet, and has pierced four beds of rock salt, the thickness of which amount in the aggregate to eighty-five feet and more. This is not, however, to be compared with the vast deposits of Cheshire, where the upper bed measures seventy-eight feet, and the under exceeds 120; while in Spain and Poland, the beds are of still greater thickness, and at Cordova the rock salt deposits are so vast that they have a depth of many hundreds of feet. The question that naturally presents itself is—how was this salt laid down, and are the beds continuous, at least are the Cheshire districts an extension of the Droitwich? and I may add that in some quarters the opinion prevails that the last is the case.

The theories that have been framed to account for the deposit of salt are ingenious enough, but antagonistic. Some geologists think that salt is a volcanic product ejected from beneath; others conjecture that it is the precipitate of a deep ocean overcharged with saline matters, and others hazard a guess that it is the result of a vast deposit from sea water lakes, cut off from the main ocean by accidental barriers of walls, something of the same sort as occurs in the well-known tropical salt water lagoons, and then in time the sun would evaporate the redundant water, leaving an ever-increasing accumulation of salt. Many objections can be urged to each of these three theories; the volcanic one is not supported by any existing parallel instance, and though volcanoes, which are generally near the sea, often deposit a crust of salt on the margin of their craters, they never, at the present time, to our knowledge, eject vast quantities of saturated brine. The second theory, in like manner, falls to the ground, since it is impossible to conceive of a vast deposit of salt as the result of a surcharged ocean, and no parallel case exists on the face of the globe. The lagoon theory is more plausible, and might account, under certain circumstances, for the deposits, were they small and thin; but to have beds of salt extending for 200 miles, with a depth of hundreds of feet, would require evaporation continued over almost innumerable ages; still, here may lie the explanation after all. At the western extremity of the expansion of the river Mancch there are large salt lakes, marking the site of the inland sea that once probably occupied a considerable part of Central Asia. The summer heat in that latitude is considerable, and evaporation is rapid, and yet, although these lakes are small, the largest hardly five miles long by two thirds of a mile in width, the surface during a favourable season does not become coated with a scum of salt more than an inch in thickness. But these lakes, though they may be considered in the light of vast natural salt pans, are so shallow that the boats collecting the salt scum actually drag in places along the bottom, and the whole of the salt, were all the water in the lakes to evaporate, would only amount to a deposit a few inches in thickness. Unfortunately the winter rains dilute the water again, so that complete evaporation of the contents of the pan never takes place. It may be a question, moreover, whether the remarkable purity of the Droitwich salt is compatible with its being deposited from evaporated sea water. Salt from sea water is exceedingly impure, and causes disease, and in

proof of this, it is only necessary to refer to the complaints uttered in our own country three centuries ago, when people had in winter to eat food preserved in impure sea-water brine.

An excellent little book, long out of print, called "Droitwich Salt Springs," was written by the late Mr. Bainbrigge, an eminent surgeon of Droitwich, who did so much, perhaps more than any one else, to bring the valuable curative properties of the brine into prominence. Mr. Bainbrigge gives some particulars that are said to be perfectly correct. He mentions that the Saline springs of Droitwich are stronger, that is more nearly saturated, than any others in Europe. His table is remarkable, and gives the solid constituents of the following seas:

Mediterranean	410 grains in 10,000
English Channel	380 " "
German Ocean	325 " "
Baltic	168 " "
Dead Sea	2460 parts per 10,000 of water
Droitwich Brine	4000 to 4200 " "
Other British Salt Springs from	1500 to 2500 " "

John Leland did not omit to visit Droitwich, and to inspect the salt works, in the reign of Henry VIII. He was greatly astonished at the activity of the place, and asked a salter how many furnaces they had in all, and the salter numbered them to an eighteen score, saying that "every one paid yearly to the king six shillings and eightpence," a far larger sum in those days than one might suppose. "Making salt is a notable destruction of wood," he continues, "six thousand loads of the young polewood, easily cloven, being used twelve-monthly, and the lack of wood is now perceivable in all places near the Wyche, or as far as Worcester." In 1662, coke began to be used at Dudley for smelting iron-stone, and before long, coal made the salters of Droitwich independent of wood, which, in those days of bad roads and defective water communication, could not be conveyed great distances without incurring almost prohibitive expense. No large woods remain close to Droitwich now, though Wyre Forest, near Bewdley, is not ten miles off; and there is a great deal of park and hedge row timber, and the appearance of the country quite up to the town is singularly beautiful, the dearth of trees being the last thing the visitor need complain about.

I have broadly stated that Droitwich is not attractive in the sense in which Cheltenham, Leamington, and Tunbridge Wells attract strangers; indeed, its own citizens cannot deny that it is dingy and sombre, partly from the canopy of steam and smoke, far worse close to the station than elsewhere, and in part from the old and tumble down appearance of the houses. An old town is often picturesque, though seldom desirable as a permanent residence, but at Droitwich other causes are in active operation to prevent those improvements which generally in England enable an old town to keep pace with modern progress. The truth is the town is slowly sinking, and the houses are falling. The incalculable quantities of brine pumped up during so many centuries have led to a gradual sinking of the surface. A little reflection would, however, show that were this sinking gradual, and were it evenly diffused over a vast area, very little injury could result, at any rate for a long time, to the superincumbent houses, churches, and streets. As a single inch of rain per acre represents 101 tons, it would take many years to lower the level of twenty square miles a foot, even at the present rate at which brine is being pumped up. But while parts of the district are hardly at all affected, others suffer a great deal, and some portions of the old town have sunk nineteen

feet in twenty years, at least that is said to be the case in Queen-street. This leads to the surface sinking in grooves, if I may so express myself, and the houses fall toward those grooves or lines of greatest subsidence. The sinking has, however, always been gradual, and there have not been any of those violent collapses which have given the Cheshire salt districts an unenviable notoriety. Only one house has suddenly collapsed of late years, and then, as the residents were out of doors at the time, they escaped injury, but many houses have had to be taken down, and large numbers are shored up to keep them from falling. House property is not a good investment at Droitwich, and cannot be recommended to speculators, indeed it is difficult to sell houses in some parts of the town at any price. Near the station, which is quite half a mile from the older streets, land subsidence is not going on, and many excellent houses have been built of late, and a few handsome and commodious villas. It is rather strange to find that some handsome half-timbered houses remain, of the description for which Worcestershire is famous, of great antiquity, in capital preservation, and in the very heart of the town, which have survived the land sinkings and the wear and tear of centuries, and promise to outlast many of their newer rivals. I stayed at the Heriots, the house of Mrs. Bainbrigge, the widow of the distinguished surgeon, who did so much for the town, and was surprised to discover that though so near Queen-street and Worcester-road, where the sinkings have been conspicuous, this old villa stands firm in its pretty grounds, unaffected by the surrounding desolation. The roads and courts of the town have to be frequently raised to keep them level and fit for carriages and foot passengers, and to provide a proper outfall for the rain, and this, while making the rates unpleasantly heavy, has increased the appearance of desolation and change, for after a time the roads are raised considerably above the level of the adjacent land; much as the constant repairing and raising of the banks of the Po, to prevent inundations, has led to that river passing over the plain of Lombardy between colossal embankments. Near Queen-street, houses can be seen the roofs of which alone remain above ground, and the irregularity in the sinking of High-street has been curious. Not more than twenty years ago rain water flowed from the Station and right into Queen-street, now there is a line of subsidence traversing High-street at right angles, near the middle, and towards it water flows from both ends. Again, in the Worcester-road, a prolongation of Queen-street, sinking has been great, and the walls enclosing the gardens in that part of the town have in places sunk until only their tops rise above the surface of the ground, or, rather, would rise, but extensive repairs have been executed, and the level of the walls has been kept up. The effect of these levellings up of the partially-submerged walls is singular, and gives them a curious patchwork appearance. Dr. William Parker Bainbrigge, the son and successor of his father, was good enough to permit me to examine his new residence in Queen-street. This house has only been built four years, and when first completed one had to ascend *into* it; one now goes *down* a couple of feet; the sinking in that short time at this particular spot has not been less than three or four feet.

No description of Droitwich that did not say something of the industry that has made the place famous would be complete, and the other day I went over the salt works. The process is almost too simple to be interesting. The brine is pumped up and stored in large reservoirs; from them

it flows through pipes into open, shallow, evaporating basins, called salt pans, perhaps twenty feet by ten; the newer pans are circular, and more scientifically constructed, and evaporation from them is more rapid. Under the pans burn huge fires, that evaporate the salt water. A man with a large wooden rake scrapes the salt from the middle of the pans to the edges, where women are standing. These people make one sad to look at, not that they seem unhappy or are unhealthy, for, on the contrary, they look modest, rosy, and strong enough, but their work and dress do not seem the best to preserve the delicacy of woman's nature; at least that was the impression which was made on my mind. They work in a loose, light linen chemise, with short skirts, hardly extending below the knees, for being exposed to great heat in a damp atmosphere, they are compelled to clothe lightly. Each woman has a number of moulds large enough to contain one of those "salt bricks" which everyone has often enough seen. The mould is put on end in the pan, and filled with wet salt scraped up from the bottom; it is then carried by the girl to a drying chamber, and subjected to a high temperature. Evaporation is rapid, and when the contents of the mould are dry, the brick is easily turned out, and piled up in a store chamber. The steam hanging over the town comes in great measure from the surface of the salt pans, which are open to the sky. But the air of the town is not damp, nor are the people unhealthy, so that Droitwich does not suffer from its peculiar occupation and atmosphere. Mr. Corbett, M.P., and his agent, Mr. Green, have been doing a great deal for the town and its trade by introducing the most perfect modern appliances, and building large public institutions. To Mr. Corbett Droitwich owes its splendid new Brine Baths, the St. Andrew's. The town has always had a full share of benefactors, and some of its alms houses, built a couple of centuries, are all that the broken down and honest labourer could desire for his closing years.

Droitwich has of late been attracting general attention as a health resort, and large numbers of sufferers from gout and chronic rheumatism have flocked to it for treatment. At this moment the accommodation for invalids is reported to be wholly insufficient for the crowds coming to the place. The brine springs are credited with almost miraculous efficacy. I remember when only a lad, and before beginning to study medicine, meeting with a lady in Birmingham, who still survives, who had often gone to Droitwich for the baths. Her first visit must have been paid thirty years ago and more. She derived great benefit, and speaks gratefully of the place. Not long ago, too, I sent a gouty patient there who had resisted all the remedies I could think of, and, to his delight and my astonishment, a stiffness of the right shoulder, that had come on after a fall from a lofty tree upon his arm, and which had practically crippled him, yielded to frequent baths. He is now working hard and long, whenever his partiality for cider, mead, and beer leaves him leisure and inclination for less pressing claims upon his time. The discovery of one of the most striking virtues of the Droitwich brine was accidental, and occurred in 1832, when cholera was raging in the town. Many deaths had taken place, when some of the sufferers were placed in salt pans, and it is asserted, though the tradition seems too good to be true, that everyone treated in this fashion recovered. At any rate, whatever the cause of recovery, before long a small Bath Company was formed, and since then the waters have grown in repute, until many

persons of high rank, some of them indeed members of the Royal Family, have gone to Droitwich, and have derived such marked benefit as to return again and again. The chief efficacy of the water is, however, in cases of gout and chronic rheumatism. In these complaints, baths moderately heated, for the brine does not ascend from a sufficient depth to be warm, and when mixed with at least an equal quantity of pure hot water, or in some cases with three times as much, are taken once or twice a day with conspicuous advantage. Dr. W. P. Bainbrigge assures me that after sufferers from rheumatic gout have had several baths, their skin becomes soft and velvety, and the water in which they have been bathing is found to contain traces of urate of soda, which that learned physician believes must have been dissolved out of the tissues by the solvent properties of the brine. Medical practitioners might think that the urate of soda had been washed off the skin, but the fact, as it was given me on good authority, is curious, and deserves extended experiment and investigation; for if the brine actually dissolves out the urate of soda from the tissues of gouty patients, its value as a remedy is placed on a very different footing. Brine tanks go by rail to Malvern, fourteen miles off, where attempts, unsuccessful ones though it is said, have been made to give the invalids, who flock to that pretty place, the benefit of Droitwich Brine Baths without the trouble and expense of going to the neighbourhood of the Wyches.

At Droitwich there are some excellent hotels, more particularly the "Raven" and the "Royal;" the former is undergoing enlargement, and there are very extensive brine baths, so that the visitor can obtain everything he needs. I was especially pleased with one of the hotels; its sitting rooms were handsome and home-like; its grounds well kept and lovely, and its general air prosperous and attractive. The new St. Andrew's Baths are large, and fitted up with the best modern appliances. These baths were only opened last summer, and this spring they have had to be made three times as spacious: they include private bathing places and large swimming baths of imposing dimensions. There is a singular lack at Droitwich of medical homes for invalids, similar to those which have made Malvern, Matlock, and Buxton famous. The sufferer would often find it convenient to have the benefit of the brine baths, and at the same time be under the constant supervision of a medical adviser. I do not know whether any of the Droitwich doctors have resident patients, as I could not obtain trustworthy information; but although the hotels are excellent, gouty sufferers generally need close supervision, and a rigid and scientific regimen, and that can only be perfectly managed in the house and under the eye of an experienced medical practitioner. There are good private establishments, where great skill is shown in the management of the inmates, and one of these houses is kept by a lady who has had a long training in a public hospital; she is the daughter of a medical man who was for many years greatly respected at Hereford.

Droitwich is not such a bad place as it looks. The country is pretty, the railway communication good, and Gloucester, Cheltenham, Worcester, Birmingham, and Wolverhampton are easily reached. Worcester Cathedral and Tewkesbury Abbey, and the lofty spire of St. Andrew's Church, Worcester, thoroughly repay a visit; so does Malvern with its grand old Priory; a little farther off is Ross, with its Horse Shoe Bend, and ever verdant fields. The Forest of Dean, and Lydbrook with its magnificent viaduct, the Wye, and Symond's Yat are not beyond easy reach, while to Hereford with its

Cathedral is only an hour's run. At Hereford, too, the beautiful Catholic Priory Church, at Belmont, on the banks of the graceful Wye, should also be visited. Still farther away the beautiful neighbourhood of Ludlow with its stately castle and grand circular church, delights the visitor; and in the opposite direction from Hereford lies the glorious valley stretching from Hereford to Brecon and Derynack; the splendid Priory of St. John's at Brecon; the Priory walks, the Brecon Beacons, the lovely valley of the Honddw, and the pretty falls of Ffrwgrech, with the beautiful lake Safaddan, and BUILT ROCKS on the Usk, are every one of them most charming. A couple of months at Droitwich in the summer would enable the visitor to get the treatment, and at the same time visit the delightful places I have named, and many more all within reach of an actively-minded lover of nature, who had a good long purse and ample leisure.

A GLANCE AT THE EXISTING STATE OF THE MEDICAL PROFESSION.

BY A PHYSICIAN.

THE mind of the medical profession at large is being constantly harassed, first by one burning question, then another, each in its turn giving rise to endless discussion; but in no case does the problem appear to find a satisfactory solution; while, amid the angry strife of words and battle of tongues, the most burning question of all: "Whither are we tending?" remains unanswered. Better, perhaps, that it should remain in abeyance for a time, rather than our ringing ears be greeted with the inevitable reply: "Lower and lower," for *facilis descensus averni*! Now, a section clamours for State recognition, that a few fortunate ones may have the satisfaction of hearing themselves addressed as "*My Lord*." Unquestionably our profession is the least recognised among all its sisters; but how ill would a title sit upon its holder that had not been freely given, how slight the *honour* that had been obtained by clamour or political intrigue! On this point our attitude should rather be that of the patient martyr at the stake than of the fawning myrmidon, or of the red-hot fanatic who kindles the flame. Another section is meanwhile clamouring for the registration of foreign degrees. This question is more easily disposed of, thus:—If in all Great Britain and Ireland the facilities for obtaining an University degree are beyond the scope and brain-power of the average medical student, then he must be content to remain a *diplomat*. It is the cry of a democracy which demands that all should be placed upon one footing, and each one be able to dub himself "M.D."

Next comes the effort of the combined colleges in London to temporise matters, and relieve gentlemen from the necessity of crossing the water to establish the fact that their mental calibre is up to the standard of the letters "M.D." They ask to be allowed to supersede, and arrogate to themselves, functions hitherto only—and rightly—possessed by, existing Universities.

True it may be, that our two great sister Universities have, in times past, sadly neglected their duties so far as medical education for the degrees they grant is concerned. But, appalled by the marvellous results of the Edinburgh University as a *teaching* centre; ashamed at the practical superiority of the London colleges and schools; they have at last awakened from their lethargy, and are nobly doing their best to redeem the past.

In what other profession, may we ask, would this universal granting of degrees be tolerated? Would the student who has successfully passed the "Higher Local" of Oxford and Cambridge be allowed to dub himself "B.A."? Would the student who has passed the final examination of the "Incorporated Law Society" be at once permitted to don wig and gown, and appear in court as a special pleader? No; and if such a state of things, as is desired and clamoured for in the medical profession, obtains, then *all* social and educational barriers must be broken down. We must have no B.A.'s and M.A.'s, no curates, vicars, rectors, canons, sub-deans, deans, archdeacons, or bishops, and even the archbishops themselves must vacate their thrones. No solicitors and barristers, resident and stipendiary magistrates, no justices of this court and the other court, no lords of appeal, and even the Lord Chancellor himself must vacate the woolsack and take his place among the crowd, shaking hands all round as he mixes with his equals. Next follows—no Queen, no Constitution, no anything; but a blissful Arcadia, wherein each man is as good as his fellow! And then—*fiat justitia (?) ruat cælum*!

Britannia must stand by her colours, and insist upon maintaining the right of existing universities, by demanding of their graduates a higher standard of intellectual attainments and professional culture.

Next we have to propound a serious question—viz., "In what other profession are its members so utterly unprotected against piratical aggression as in ours?" Let an unqualified man pose as a solicitor. Instantly there is a hue and cry; like a pack of hounds, hungry for the quarry, every solicitor is at once on his track; the offender is soon overtaken, and meets his professional death in one or other of our Law Courts; while among ourselves, prescribing chemists diminish our coffers; unqualified quacks and abortion-mongers flourish unchecked; "branch surgeries," managed by unqualified assistants, encroach upon the territory of the struggling neighbour; patent medicines, protected and sanctioned by Government, supplant the medical man's prescription; and "lady doctors," bedecked with *foreign degrees*, heralding their approach to our provincial towns with flaring advertisements, including gigantic portraits of their own fair selves, carry on a vigorous campaign, trade upon human credulity, and quit the scenes of their labours with pockets well lined with exorbitant fees, such as would have been grudged or denied by their dupes, had they been demanded of them by the skilled physician or surgeon.

One more matter demands attention, and we have done. It refers to the manner in which our medical officers of health are appointed. True, in large towns, the municipal authorities are beginning to recognise the all-importance of appointing men thoroughly well qualified for the work; but what obtains in other districts? Men are appointed and entrusted with the well-being of the community, who absolutely *know nothing* practically of the duties they undertake. For example: a young man gets his M.R.C.S., L.S.A., takes a house-surgeoncy or two to allow of his attaining an air of maturity fitting him for outside practice; perhaps in the interim tacking on the M.D. of St. Andrew's, or maybe of some better-class university, requiring only one year's residence, and then casts his eye round, Micawber-like, in hopes of something "turning up." A medical officership to a certain union is declared vacant; he has influence in the county, and gets the appointment, practically unacquainted with all matters relating to State medicine, such as food and

water analyses, sanitary engineering, &c., &c. If he be painstaking and conscientious, he sets to work to *learn* the duties of the post *after* he has been appointed to it. On the other hand, secure by reason of the influence which has gained it for him, in the enjoyment of the comfortable income it brings in, he leads a lazy, good-natured kind of existence, putting in an appearance when any neighbourhood is threatened with an epidemic; making a few suggestions, but relegating to others more skilful than himself, the investigation of the more minute details of his calling. Lest we be thought guilty of exaggerating the existing state of things, let us refer to an advertisement to be found in the *British Medical Journal*, of February 18th of the current year, headed: "Water Analysis, per sample, 10s. 6d.," where a gentleman, evidently by his qualifications well adapted to the work, and a public analyst to boot, comes to the rescue of his weaker brethren by "undertaking the analysis of samples of water for medical officers of health at the above fee." What a satire upon the existing condition of "State Medicine." What a bolus for ratepayers and their guardians to swallow!

Let us analyse this advertisement more closely, and see what we read "between the lines." Not only that this skilled gentlemen will do for "medical officers of health" certain work that they ought to do, but cannot do, for themselves; but further, that "officers of health," simply by virtue of their office, and because they are supposed to know more of these matters than anybody else, are inundated with "private" samples of water for analysis, the minimum fee for which is one guinea. They cannot conduct these analyses themselves, but their advertising brother can; so the samples are forwarded to him, and his report, duly made out, is sent in by the public official as original; carrying with it, after deducting postage, a net profit of 10s. 3d. To sum up, we unhesitatingly state that it is but right, in the interests of the public, where health and well-being are at stake; that only those should be appointed to office, who, by education and subsequent examination, have proved themselves especially qualified for this important branch of professional service.

While the whole state of the profession stands in urgent need of medical reform, we are dinned with the cry for universality, which demands that every man shall stand, and be considered equal to, his neighbour. With whom does the solution of the problem rest? Surely with the leaders of the profession, whose timidity or politic inertia is to be lamented. Can it be, that secure in the pride of their well-earned position, resting in the comfort of their magnificent incomes, they care not what becomes of succeeding generations? We trust not. The remedy lies in their hands. Let them demand a "one portal" system for *admission* to the profession; a higher standard both of education and examination for the higher degrees, and special education and qualification for the department of State Medicine.

THE INDIAN GOVERNMENT AND SPECIFIC DISEASE.

By A. W. WALLACE, M.D.

THE spread of specific disease among all sorts and conditions of men in the English nation is a fact to which every hospital and *post-mortem* room bears testimony. The results of it meet the physician at every turn. It is filling the Divorce Court with the records of spoiled lives and broken hearts. It is sapping the foundations of health in

multitudes of young men, filling their life with pain and bringing them to a premature grave. It is poisoning the constitutions of multitudes of women whose misfortune it has been to wed impure men, and it is filling them with a loathsome disease. It is blighting the young life of multitudes of innocent children, who bring into the world with them the destructive virus. It is the Moloch of modern society, worse than any ancient Moloch in that it consumes its victims with an inward fire. None know so well as medical men the amount of pain and sorrow, and misery and death that specific disease is at present causing amongst all ranks of society. Two remedies are proposed for this state of things: very opposite they are in their nature. One adopts the simple and straightforward principle that men, just as much as women, are to be trained to lead pure lives; that the sexual appetite, just as much as any other, ought to be under the control of the will; that men are not beasts, controlled by unconquerable lust; that they are under no law of iron necessity compelling them to do wrong; and that by wise and careful training and instruction, young men may be led to live pure lives until they have an opportunity afforded them of honourable marriage.

The other remedy is to accept impure connection as a necessary condition of unmarried life in men, and, therefore, to provide clean and healthy harlots for them in sufficient numbers to reduce the chance of specific disease to a minimum. To locate these harlots in comfortable houses, within easy reach of the unmarried population. To supply these houses with means of immediate ablution. To place the women under the charge of a well-paid procuress, who shall frequently inspect them in order to see that they are not suffering from specific disease, and whose business it shall also be to keep up the supply of good-looking and attractive girls; and, finally, to pay medical men, who shall be so lost to all sense of shame, and decency, and honour, and obligation of their graduation oath, that they shall be the inspectors of these bawdy houses and of their inmates, and shall further give instruction to young men and lads how they may fornicate without risk of contracting disease.

Our readers must, by this time, have begun to think that we are getting off our head, and that none could have the baseness or the temerity to propose such a scheme. Doubtless this is true so far as this country is concerned. Were anyone to propose the adoption of such a scheme in any of our great cities, or were the head-masters of Harrow, Eton, or Rugby, to propose the erection of houses of ill-fame within the precincts of these great schools, he would be hooted out of society with the execrations of all righteous men on his head. Yet we have before us a "Circular Memorandum, addressed to General Officers commanding divisions and districts," dated "Army Headquarters, Simla, 17th June, 1886," in which "His Excellency, the Commander-in-Chief," gives orders for all these things being done. Here are some of the direction contained in it.

"(e) Where lock hospitals are not kept up it becomes necessary, under a regimental system, to arrange for the effective inspection of prostitutes attached to regimental bazaars (in idiomatic English, brothels) whether in cantonments or on the line of march."

"(f) In the regimental bazaars it is necessary to have a sufficient number of women, *to take care that they are sufficiently attractive*, to provide them with proper houses, and above all, to insist upon means of ablution being always available."

"(g) If young soldiers are carefully advised in regard to the advantages of ablution, and recognise that convenient arrangements exist in the regimental bazaar, they may be expected to avoid the risks involved in association with women who are not recognised by the regimental authorities."

Paragraphs (e) and (g) define the duties which fall to the lot of the medical officer. He is inspector of harlots, and instructor of young men how to fornicate without risk. We have often been puzzled to account for the contempt in which the Army Medical Department is held by the combatant officers, especially in India; we understand it all now. When the Contagious Diseases Acts were in operation in this country it was at least possible to offer the apology for them that they simply regulated a condition of things which they did not create; that inspection was used as a means of reformation, and that it afforded an opportunity of warning uninfected young women of the danger of the course they were entering on, and giving them opportunity of forsaking it. But in India women and houses are provided by the Government, and the medical inspection is with a view to the continuance of the women in their degraded employment, unless they are physically unfit for it; added to which is the order that "young soldiers be carefully advised as to the advantages of ablution." Truly if the medical officers choose to accept the position of regimental sodomites they will receive their reward—a pecuniary one, for "medical officers may be prepared to study and practise this particular branch of their professional work, under the assurance that their doing so must certainly result in the recognition of their efforts (d)"—and with it the contempt of their employers, in spite of the protestation of "His Excellency" that such employment "can no longer be regarded as derogatory to the medical profession." Here are some further regulations:

"Where cantonment funds can afford it, experienced and reliable Dais—i.e., procuresses—should be employed to supervise the registered women."

"(3) Such Dais should be well paid if the fund can afford it."

"(n) Requests that the attention of officers commanding stations may be drawn to the desirability, when constructing free quarters for registered women, of providing houses that will meet the wishes of the women. (2) Unless their comfort, and the convenience of those who consort with them is considered, the result will not be satisfactory."

We have seen a plan of a cantonment in which the brothel-houses occupied quite as conspicuous a position as the regimental chapel—as indeed they very well might, for Dai and Chaplain are equally in the pay of the government.

We have thus proved from their own documents that the Government of India is doing the same kind of thing as if licensed brothels were introduced into the public schools and colleges of Great Britain. They are providing for the wholesale demoralisation of the young men who go to India as soldiers. They have the assurance to say, "much may be done to encourage a feeling among the men that it should be a point of honour"—to keep themselves from fornication? No! but "to save each other from possible risk in this matter." How? By avoiding an unlicensed woman, by practising ablution, and if one contracts disease by giving the number of the house where he believes he has contracted it.

Here is the result of the education given in this school of vice. The number of "passes" shews a steady increase from year to year, till in 1885 they are nearly double what

they were in 1871. These are the figures, taken from page 97, "Report on Sanitary Measures in India in 1885-6."

NUMBER OF SOLDIERS PER THOUSAND AFFECTED WITH
SPECIFIC DISEASES.

1871.....	196.8	1879.....	234.8
1872.....	179.0	1880.....	249.7
1873.....	166.7	1881.....	260.5
1874.....	192.7	1882.....	265.2
1875.....	205.1	1883.....	270.3
1876.....	189.9	1884.....	293.9
1877.....	208.5	1885.....	342.7
1878.....	271.3		

The Commander-in-Chief, writing in June, 1886, says that "Venereal disease is still on the increase." The only possible explanation of this is, that from the facilities afforded, and the countenance given by Government, to licensed prostitution, a far larger number of men than heretofore have frequented brothels, and that the number is on the increase.

There is just one sentence in His Excellency's circular to which we can heartily subscribe. It is this, "*It is necessary to abandon a false modesty in dealing with the matter in question.*" Assuredly so. When men in high position set at naught the laws of nature and of God, it is time to speak out. We have sought to do so. It is a matter which concerns every one of us. As electors, we are bound to see that our representatives in Parliament do not permit such things to be done. As members of an honourable profession, we must see to it that our *confrères* do not become inspectors of brothels and worse. As men, we have to see to it that our younger brothers are not systematically educated in vice by those who ought to set them an example of continence; and we have to remember that the downfall of a State has always been presaged by dissoluteness of morals.

There is but one remedy for this state of things, and it is publicity. The perpetrators of these deeds of darkness must be piloried in the light of public opinion, be their station what it may.

Clinical Cases.

CASES FROM MY NOTE BOOK.—TWO CASES OF PUERPERAL FEVER.

BY CORNELIUS IG. KELLY, L.R.C.S.I., J.K.Q.C.P.I.,
EVRECOURT, CO. GALWAY.

Case 1.—Mrs. H—, Kilemore, was delivered on April 6th, 1886, of a living child. Next day I was sent for, and on my arrival found the placenta, which was morbidly adherent, still detained. I removed it carefully, and syringed out uterus with cor. sub. solution. She made a good recovery. I advised her if she should ever be confined again, a not very improbable thing, as she was only thirty-five years of age—to have a medical man in attendance, and not trust her life in the hands of an ignorant old woman. She then informed me that in all her previous confinements—four in number—she was attended by the dispensary doctor, and that the after-birth in every case gave trouble. On August 7th, 1887, she gave birth to her sixth child, and five days later I was asked to see her. I found her lying on her back, very weak, and between her words she had to moisten her lips with her tongue. I shall give the history of the case in her own words: "On Sunday—this is Friday—I got bad while they were all away from home, and I had no one to send for you. I

was not more than two hours sick when the child was born. Old Mary H— had the name of being very lucky in such cases, and they sent up for her. When she came she pulled away about half the after-birth, and left the rest to come away by itself. All Sunday night I was terribly bad with after-pains—they were worse than the pains of labour—and on Monday I got no rest from them. For three whole days I was in agony, and though they poulticed me and stuped me, and did everything they could think of, I got no ease until Wednesday night, when I slept well, but the morning after the bowels began to go, and I was upon the chamber-vessel every minute. To-day brought its own trouble, for the thirst is killing me, and my tongue is like a burnt stick in my mouth, and the stench is awful, I can't bear myself."

I examined her: her pulse was very weak and very rapid, 140; temperature 102.5°; respiration 30. When I raised the bed-clothes the stench was overpowering. I found the uterus simply a bag of foetid pus, and as large as a foetal head. The abdomen was greatly distended and very tympanitic, and did not cause any pain when pressed. Her tongue was small and very red. She had a good share of milk, and was nursing her child, who seemed to be doing well. Her mind was quite clear, and she never complained of headache or rigors. Two hours after my visit the patient died.

Remarks.—This case is very interesting from many points of view. The disease was allowed to make headway, unchecked, untreated, and consequently was of very short duration. Nature did her best, but failed. The after-pains tried to rid the uterus of a foreign and poisonous body, and the diarrhoea, which began on the fourth day, was a means of getting rid of the poison from the system. The uterus had diminished very little in size after delivery, and thus a large surface for absorbing poison was left. If this patient had been attended by a medical man, I have not the slightest doubt she would—as on previous occasion—make a good recovery. How many lives are lost annually in Ireland from the interference of ignorant old hags? In three short years I can point out three. There is not a dispensary medical officer in Ireland to-day, no matter how young he may be, that cannot point out many such cases.

Case 2.—Mrs. G—, Slaughter, æt. thirty-six years, was delivered of twins on the 3rd February, 1888. She did not expect to be confined until the first week of April. Her labour was easy, lasting only thirteen hours. The head presented in her first child, and delivery was perfected by the application of Murphy's short forceps. The breech presented in the second child, which was very easily delivered owing to his small size, one hour later than the first. The placenta—there was only one—came away fifteen minutes after the birth of the second child. The uterus contracted rapidly and firmly, and there was no *post-partum* hæmorrhage. There was no laceration of the perineum, this being the seventh confinement.

The patient went on well for six days, during which time she was quite free from after-pains. The pulse and temperature were normal. On the seventh day feverish symptoms set in. She complained of headache, and became very cross. The temperature went up to 102.5°, and the pulse to 100. From the 10th to the 15th February there was very little change, except that the temperature became higher (103.5°) and the pulse faster (110); also diarrhoea had set in and was very troublesome. I saw her for the first time on the 16th February, when the above particulars were given

me by Drs. Kerans and O'Farrel, who were in attendance and who kindly asked my assistance. As the patient replied to my questions she spoke rapidly and loudly, but not quite clearly. She complained of deafness and of noises in her head, and these were caused by the quinine which she had been taking for the past week. Her face was flushed; temperature 104°, pulse 115, respiration 30. The tongue was covered with a brownish fur. A rash had appeared two days previously on her neck, but had disappeared before I examined her. She was perspiring profusely. The abdomen was distended and very tympanitic, and did not cause her any pain when pressed by the hand. The uterus had nearly got back to its normal size, and the lochial discharge had ceased on the 15th. As she did not permit the children to go near her breasts the secretion of milk had stopped five or six days after delivery. Numerous bullæ, containing a dark-coloured fluid, had formed over the legs and on the inside of the thighs. Gripping pains, which were followed by diarrhoea, were causing her a great deal of annoyance. The urine was scanty and high-coloured, but contained no albumen.

From the 16th until the 22nd of February there was very little change, the morning temperature being 103.5, and the evening 104.4; the heart's action became tremulous, and the pulse increased in frequency to 130 in the minute. The breathing, too, became very hurried, the respirations being sixty per minute. The diarrhoea continued in spite of treatment, and for the first time, on the 19th, the motions and urine were passed involuntary. She complained of sore throat on the 18th, and by putting her fingers into her mouth tried to draw out some viscid sputa which seemed to worry her very much. Bronchitis set in on the 21st, and on the 23rd of February she died.

Treatment.—For the purpose of reducing the temperature a mixture containing quinine and hydrobromic acid was given, but it had no beneficial effect whatever, though each dose contained ten grains of sulphate of quinine. It produced deafness, etc., and this worried the patient. I was anxious to give antipyrin, for two reasons, the first being that in a case of high temperature occurring in an acute case of phthisis—which had recently occurred in my practice—its power of rapidly reducing temperature was great; and the second, that in a case of puerperal fever reported by Dr. Edwards in the *Provincial Medical Journal*, December, 1887, "it brought down the temperature most satisfactorily;" but for some reason my colleagues would not agree to its use. Stimulating and supporting treatment we adopted. Brandy in tablespoon doses was given her every two hours, and when this disagreed, champagne was given instead. The diet consisted of milk, beef-tea, beaten-up eggs, chicken jelly, port, and extract of meat. The uterus was daily syringed from the very beginning with a solution of Condy's. Hot poultices were applied to the abdomen; and when extreme tympanitis set in, turpentine strips were freely used, and turpentine given internally, but no effect was produced by their use.

Remarks.—What caused septicæmia here? The labour was easy, and not of long duration. The placenta came away completely, and there was not the slightest laceration of the perineum. The patient's surroundings, from a sanitary point of view, were simply perfect. The district in which she resided, and the surrounding districts, were free from erysipelas, scarlatina, etc. The only conclusion I can come to is that in this case the cause was due to the transmission by post of the virus of puerperal fever, and here are my proofs:—A Mrs. L— sent a congratulatory

letter to my patient four days after her confinement. This Mrs. L— was just then recovering from an attack of puerperal fever brought on by a part of the placenta being retained. Medical men have carried this disease from one patient to another. Scarlatina, which is closely allied to it, has been carried in this way, and has also been transmitted by letters. I have never heard or read of a case of puerperal fever being so transmitted; but if scarlatinal poison is carried in this way, why not the poison of puerperal fever as well? One thing I could not help remarking in all the cases of puerperal fever that have come under my observation, and that is, that where pain was present, delirium was absent, and *vice-versâ*; or in other words, pain seemed to prevent delirium.

(To be continued.)

CASE OF LUPUS OF THE FACE.

BY EUSTACE J. DE GRUYTHER, L.R.C.P., L.R.C.S., L.M. (EDIN).

MRS. M—, aged thirty-five, mother of eight children, all healthy, two miscarriages from fright, consulted me in the early part of March of this year about her face. My diagnosis was lupus. The history was that the disease had first appeared as a small lump on her forehead five years ago; this lump gradually extended, by what, from her description, would seem to have been a process of ulceration, the ulceration extending at the edges, healing behind them, and again breaking down in places, until the whole of her right cheek, her chin, nose, and forehead were equally involved. When I first saw her, the skin of these regions was rough and uneven, thicker in some places than in others, presenting many scabs, a raised border, and some white scars within the boundaries of the borders, and some moist ulcerous patches. As to family history, no relations had been afflicted with any similar disease. Her mother died of phthisis. No history of syphilis. The patient had consulted many medical men before, but had not been scraped or cauterized.

Having read Mr. Knaggs' communication in your publication for March, I determined to give the treatment he there recommends a trial. I prescribed Mr. Knaggs' emulsion of bismuth, vaseline, gum acacia, boric acid and water, on March 6th, ordering it to be painted all over the parts affected three or four times a day, and particularly ordered that the parts should not be washed. In less than three weeks the scabs began to fall off; in four weeks from the commencement of treatment all the scabs, except one small one, had fallen off, and this one I expect will come off in a day or two, as it is quite loose. After the scabs had fallen off the skin appeared sound, fairly smooth, but red; after a few days the redness began to subside, and in places there is now almost a normal appearance where formerly there was a hideous disfigurement. There is so far no sign of a relapse; the only thing is, that instead of all the scabs coming off at the same time, they have fallen off at different dates, and the last one is more obstinate than the others. After the scabs had fallen off, the emulsion was not applied to their sites; at the present time it is only being applied to the remaining scab. No internal remedy was used.

I shall continue to watch this case, and shall hope to be able to report to you in six months' time that there is no return of the disease; and though, if that should be the case, it would be too soon to consider it a cure, yet I am sure, if it prove only a palliative treatment, the best thanks of the profession will be due to Mr. Knaggs, for publishing in your columns his enlightened views on the treatment of lupus.

ARRESTED APICAL PHTHISIS.

BY FRANCIS TAYLOR SIMSON, L.R.C.P. LOND., ETC.

PRIZEMAN IN THERAPEUTICS, ETC.

PROBABLY every physician would have hesitation in subjecting a patient suffering from a dire disease to any but orthodox treatment; so, although for some time past I have had a new treatment of consumption in my mind, it is only recently I have carried it into effect. The extremely favourable result, exceeding all expectation, induces me to place this single case, for what it may be worth, before the profession.

F— H—, æt. 22, height five feet ten inches, single, a young man, employed as an umbrella maker, first consulted me on February 3rd last. He had been a volunteer from the age of sixteen to twenty. Was well up to the beginning of last November, when he was ill for four days with what was diagnosed scarlet fever, but there was no rash and the skin did not peel. In fourteen days he resumed his work, which he continued until the day before he consulted me. After the November illness he was frequently sick, vomiting after breakfast and supper. He never drank to success, being almost a teetotaler. On Christmas Eve he first noticed a cough, and found he could not sing. The cough became gradually worse, and was accompanied by increasing expectoration and occasional aphonia. From this time he wasted, and became gradually weaker; his appetite failed, and night sweats commenced. A short time before he consulted me his throat felt uncomfortable, and on February 2nd he went to a throat hospital, but his larynx was too obstructed for examination.

His father died, aged forty-nine, of paralysis; mother alive and well, aged sixty-eight, supposed to have been consumptive when a girl; seven brothers and sisters—one died of scarlet fever, aged eight. No history of phthisis or cancer in any relatives. On examination—tongue flabby, furred, and teeth indented; sordes on lips; teeth bad; bowels constipated; skin very moist; great palpitation; epigastric pulsation; heart's sounds normal; urine normal, excepting phosphates; weight, with thick overcoat on, and fully dressed, nine stones; chest, right apex only abnormal; deficient movement; increased vocal fremitus; dull; increased vocal resonance; abundant subpericardial rales, anteriorly and posteriorly; throat, aryteno-epiglottidean folds so œdematous that it is impossible to see down larynx; posterior rhinitis. On microscopic examination of the sputum, crowds of tubercle bacilli are visible. Ordered to sleep in a large, well-warmed room, the air of which is to be rendered aseptic by steam impregnated with oleum eucalypti and oleum pini sylvestris; to take ol. morrhue 3 ij. and syr. hypophosph. co. 3 j. three times a day; to eat as much as possible; and to use the following inhalation every night:—

R Hydrargyri perchloridi.
Ammonii chloridi, aa gr. ½
Aquæ dest., 3 iv.

One tablespoonful to be added to a tablespoonful of hot distilled water, and thoroughly inhaled in the form of spray every night. When he left me, I watched him cross the road, and it was with difficulty he crawled into a passing conveyance, so weak and tottering were his footsteps.—February 11th. Hear he feels about the same.—February 18th. Same report; spray causes no irritation; ordered spray solution to be made three times as strong of the perchloride; to continue other treatment.—February 25th. Patient staying at Wandsworth; feels better; takes more interest in local and general news; plays with the

children of the house; coughs less.—March 3rd. Still better; has returned home to Whitcombe Street, S.W., as he finds Wandsworth too cold; bowels very constipated; ordered ext. cascarae sagradae, gr. iij., every night if required.—March 10th. Still improving; ordered spray solution to be increased in strength to two grains of the perchloride to the four ounces.—March 17th. Improving.—March 24th. Much better; coughs less; eats well; has increased four pounds in weight.—April 1st. Better.—April 3rd. Looks and feels better; weight 9 stones 6lbs., pulse 120, weak; says sputum is stained with blood, especially after using spray; right apex less dull; vocal fremitus and resonance not so pronounced; “crepitations” not so abundant; aryteno-epiglottidean swelling gone, but larynx still swollen.—April 7th. Patient much improved; weight 9 stones 8lbs.—April 14th. Very much better; weight 9 stones 11lbs.; his friends say he looks better than before illness; *no crepitations*, but still increased vocal fremitus and resonance, and some dulness; cog-wheel respiration right supra-scapular fossa; slight laryngitis only. *Sputum quite free from bacilli*; sent fresh lot to Dr. Gibb, the well-known pathologist, who also found it free from bacilli.—April 21st. Patient looks and feels quite well; walks upright and firmly; weight, nine stones, twelve pounds; says all his clothes are too tight; cough gone; appetite good; tongue still coated; flatulence; bowels regular; sleeps well; no night sweats; still deficient movement, right apex; not so dull as last time; increased vocal fremitus and resonance; breath sounds weaker than at left apex, less air apparently entering; no moist sounds; laryngitis gone; vocal cords white, but right one shows slight traces of previous inflammation; ordered to discontinue spray.—April 30th. Still more improvement; weight, ten stones; friends don't recognise him at first; goes to the theatre; eats well; has had to-day—at 7.15 a.m., two eggs beaten up with milk; 11 a.m., half pint of cocoatina and two slices of bread and butter; 1.15 p.m., half pound steak, potatoes, and rice pudding; 4 p.m., cup of tea, two eggs, and two slices of bread and butter; 6 p.m., two eggs beaten up with brandy and water; is going to have something more later on.

Remarks.—This appears to be a case of debility, induced by dyspepsia, where the tubercle bacilli obtained access to the lungs, and there rested and multiplied. The germs being, as is well known, extremely strong (so tenacious of existence that they can literally rise again from the dust), nothing but the most powerful germicide could destroy them. This was administered in the form of spray, a quarter of a grain of the perchloride being inhaled every night. This, I believe, killed the germs, and cured the patient.

SUCCESSFUL CASE OF TRACHEOTOMY FOR CROUP.

BY COLIN MACMILLAN, L.F.P.S., L.S.A.,
NOTTINGHAM.

ON March 28th, 1888, I was called to visit a girl of four and half years, suffering from hoarseness, slight difficulty in breathing and some cough, temp. 100.6. Examination of the throat revealed nothing beyond a moderate degree of congestion of the tonsils and fauces. Thinking it to be a case of simple laryngitis I prescribed accordingly. The treatment was continued till April 2nd, with no alleviation of the symptoms; the temperature increased to 101.4, and the dyspnoea was gradually becoming more marked. It then became evident I had to deal with a case of mem-

branous croup. I ordered an emetic, poulticing and expectorants without avail, the disease was fast gaining ground, and a fatal issue seemed to all appearance only a matter of hours. The child was gradually becoming cyanosed, and the same night, in consultation and with the kind assistance of my friends, Drs. Stephenson and Michie, I performed tracheotomy, an ordinary vulcanite tube being inserted.—April 3rd. Breathing easy; temp. 100.6; rusty tough expectoration expelled through tube.—April 4th. Patient somewhat febrile; temp. 101.2; a dose of castor oil and an enema given, which gave great relief; on the following morning the temperature was normal.—April 13th. The tube was removed, and the wound rapidly closed and healed. At the present time the child is perfectly well. As a minor point in the after-treatment, I may mention the use of Gamgee tissue in place of ordinary cotton wool for covering the opening of canula, the gauze on the former substance prevents the blocking up of the tube from without, and adds greatly to the comfort of the patient.

Reviews.

Medical Lectures and Essays. By GEORGE JOHNSON, M.D., F.R.C.P., F.R.S. 8vo. London: Churchill, 1887. pp. 900.

AS IT would be impossible within our limits to give a full account of the contents of this volume, we must endeavour in the first place to satisfy our sense of obligation to our readers by an enumeration of the subjects of which it treats. These are: 1. Introductory address on medical work and medical duty; 2. The physiology of the circulation; 3. On certain physical phenomena connected with the circulation, etc.; 4. On a retrograde engorgement of the blood-vessels; 5. The action of blood-letting, heat, cold, and irritants, on a treatment of disease; 6. Pathology and treatment of cholera; 7. On *delirium tremens*; 8. Mental shock and anxiety; 9. Epilepsy; 10. Rigors; 11. Hysteria; 12. Apnoea; 13. Coma; 14. Dentist's Leg; 15. Senile degeneration of the blood-vessels of the brain; 16. Poisoning by homœopathic solution of camphor; 17. Lead poisoning; 18. Nervous disorder excited by a foreign body beneath the cicatrix of a wound; 19. Foreign bodies in the throat and air-passages; 20. Croup and diphtheria; 21. Pathology and treatment of diphtheria; 22. Aphonia; 23. Indications for tracheotomy in laryngitis and diphtheria; 24. Spasm of the larynx; 25. Pressure upon the vagus and recurrent nerves; 26. Pneumonia; 27. Pleurisy; 28. Catarrh, etc.; 29. Emphysema of the lungs; 30. Hæmoptysis; 31. Perforation of the pleura; 32. Physical signs beneath the clavicle on the two sides; 33. Acute endocarditis; 34. Valvular disease of the heart; 35. Aortic and mitral incompetence; 36. Pericardial friction sounds; 37. Embolism and thrombosis; 38. Thoracic and abdominal aneurism; 39. Backache; 40. Hæmatemesis; 41. Effusion into the peritoneum; 42. Stricture of the bile-duct; 43. Peritonitis fatal from escape of hydatids of the liver; 44. Diarrhoea of typhoid fever; 45. Bright's disease; 46. Milk diet in inflammation of the bladder; 47. Urine testing; 48. Movable kidney; 49. Cure of cancer of the testicle; 50. Laryngoscopy; 51. The Harveian Oration, 1882. A glance over the preceding list of subjects will at once show to what extent the progress of medical knowledge has been advanced by the researches of Dr. Johnson within the last half century.

"It is probable," remarks the author, in the opening of his first chapter, "that most men who have lived beyond middle age have sometimes indulged the wish that they could begin life again, with the aid and guidance of such experience as they have acquired during their past career." We should be disposed to add, that no thoughtful man could fail to indulge in such retrospective reflections, more especially when there is placed before him such a summary of the results of a long life of hard work as is presented in the nine hundred pages of this volume of Lectures and Essays by Dr. George Johnson. Medical practice in the last half century has been largely influenced by the teaching, and by the investigations—physiological, pathological, and therapeutic—of Dr. Johnson, as will unhesitatingly be admitted by all who have during that period reached the "autumn of life," engaged in the active duties of their professional calling. Dr. Johnson's views on cholera are worthy of the gravest consideration. We have, within the last few years, had warnings of the reappearance of cholera in England. It is therefore of the utmost importance that we should be prepared to meet it. The most effectual mode of disarming the disease of much of its power is to have some principles of treatment. These are to be found in Dr. Johnson's essays. In times gone by there was, it can scarcely be denied, too much of hap-hazard therapeutics. The evacuant practice, based upon the pathology taught by Dr. Johnson, assumes a character of certainty, and may therefore be carried out with a degree of confidence not experienced under the opposing theories, in accordance with which astringents were administered. The following extract contains the essential features or principles upon which Dr. Johnson founded his therapeutics of cholera:—

"As venesection causes a rapid dilution of the blood, by water passing from the tissues through the walls of the vessels, and as the operation of a hydragogue purgative often results in the removal of a dropsical accumulation—so profuse choleraic purging first tends to lessen the contents of the blood-vessels, and then, to fill the vacuum and restore the equilibrium, water passes from the soft tissues into the blood, which then maintains its fluidity, notwithstanding the copious discharge of liquid through the bowels" (p. 41). It has been assumed that the worst symptoms of cholera are due to the drain of fluid from the blood. The practice based upon this theory is to check the purging by opiates and astringents; but Dr. Johnson shows from his own observation, and from the published statements of writers of note, that there is no relation between the loss of liquid and the degree of collapse—often, indeed, the reverse. "There is," observes Dr. Johnson, "something in the collapse of cholera which is essentially different from the mere exhaustion which leads to syncope. In fact, the only symptom which is common to the two conditions is the extreme smallness and feebleness of the pulse. . . . One great distinction consists in the remarkable blueness, coldness, and other symptoms, indicating that during the collapse of cholera either the aëration of the blood is greatly interfered with, or its passage through the lungs is so much impeded as to cause engorgement of the systemic veins; while no such symptoms of obstructed circulation and respiration occur in ordinary cases of exhaustion from excessive purging. Another great and obvious distinction is this: that whereas a patient exhausted by hæmorrhage . . . is unable to assume the erect position without fainting, a patient in the collapse of cholera . . . is often able to stand without

becoming faint, and even to walk a distance, which must require a considerable amount of muscular exertion" (p. 79).

Space forbids further quotations to show that the cholera poison exerts an immediate power in impeding the circulation through the lungs. The evidence adduced by the author to show the direct benefit experienced by venesection and evacuates is more than sufficient to establish his position, which is further strengthened by a consideration of the unfavourable results of treatment by opiates and astringents. Castor oil, not opium, may be said to be the sheet anchor upon which, according to Dr. Johnson, reliance is to be placed, not only in cholera, but in choleraic diarrhoea. Should the occasion again arise, we doubt not that Dr. Johnson's theory and practice will stand the test of experience. The vital importance of Dr. Johnson's theory and practice in cholera has left for our consideration of other topics less space than we could have desired, but we must not omit to direct the attention of our readers to one or two subjects which Dr. Johnson may be said to have made his own. Of these, more particularly we must point to renal physiology and pathology. The exigency of space alone compels us to pass over many others, which we trust our readers will consult of their own motives.

Renal disease and tests for urine are amongst the subjects upon which Dr. Johnson has shed new light by his researches. In chapter xlv. the author describes the intimate structure of the kidney, and the various modes of testing urine. Nitric and picric acids are the tests upon which Dr. Johnson relies for the detection of albumen. The conditions under which each of these is most suitable are given in detail by Dr. Johnson, and their supposed fallacies are closely examined, while it is pointed out that even in morbid states of the kidney the urine may not always show evidence of the presence of albumen. Thus Dr. Johnson adds a caution against "testing for albumen only one specimen of urine, and that one which had been passed before breakfast. It frequently happens that, while urine that is passed after resting in bed and before breakfast is quite free from albumen, that which is secreted after food and exercise contains albumen in abundance. In many cases food has a very decided influence in the production of albuminuria." The nature of the pathological lesions constituting the various forms of Bright's disease are accurately described, together with the microscopic characters of the morbid urine and structural changes in the kidney—particularly in the arterial coats, hypertrophy of the muscular coats of which Dr. Johnson has shown to be the cause of hypertrophy of the left ventricle of the heart, and other consequent morbid complications. The contention of Sir William Gull and Dr. Sutton is briefly discussed. Following on the preceding we have the author's account of the various tests for sugar in the urine, the most valuable and reliable of which, both for quantitative and qualitative analysis—the ferric acetate, and the picric acid with potash test—we owe to the investigations of the author. The volume concludes with the Harveian Oration, 1882, in which Dr. Johnson vindicates the fame of Harvey from the claims of Cesalpine, and other Italian anatomists, for the discovery of the circulation of the blood. With much regret we feel that want of space compels us to close our notice of this volume, passing over by far the majority of subjects which were enumerated at the outset of this notice. It is not often that a retrospect of a life's work can bring together so valuable and large a mass of available practical instruction.

W. B. KESTEVEN, M.D.

Gout and its Relations to Diseases of the Liver and Kidneys.
By ROBSON ROOSE, M.D., F.C.S. Fourth edition.
London: H. K. Lewis, 1887. pp. 169.

THE author has good reason to congratulate himself upon a demand for a fourth edition of this monograph, within two years from its first publication. In the preface to the first edition he stated that while far from denying the influence of heredity, he was fully convinced that functional disorder of the liver underlies the majority of gouty manifestations, and that the kidneys are only secondarily implicated. This view he has seen no reason to abandon, but on the contrary has gained increasingly strong conviction of its therapeutic importance. Bringing to the study of Dr. Roose's exposition of the nature and treatment of gout, the experience derived from many years' practice, we cannot but fully concur in the views he has put forth. Especially do we agree in the following observations: "Gout is undoubtedly one of the most remarkable and perplexing disorders with which the physician has to deal. Wayward and capricious in its onset and course, and astonishingly varied in the forms which it assumes, its manifestations may, at first sight, appear to be subject to no intelligible law." Such, indeed, is the character of gout, that it has become almost a matter of course that in an indefinite case of disorder, failing a clearer diagnosis; *Gout* should be assumed, or a "gouty diathesis" has to afford an explanation of the symptoms; a remnant of the old humeral pathology. The author shows that Cullen's view, that gout is an hereditary neurotic disorder, has largely gained ground. "Three principal theories," Dr. Roose remarks, "are in vogue with regard to the nature and origin of gout. According to the first of these, gout is due to digestive anomalies, causing the blood to become loaded with certain morbid elements produced mainly in the stomach and duodenum, and uniting in the blood with some element of the bile which has been suffered to accumulate, through defective secretory action of the liver. The second theory likewise assumes an impure state of the blood, but refers this condition principally to disturbance of the renal function. Dr. Garrod is the chief supporter of this theory. The third view, that of Dr. Cullen, already referred to, has lately been resuscitated." The facts upon which these theories have been based constitute the body of this treatise. The following brief summary of the propositions deduced from them by the author will put our readers in possession of the principal points in the pathology of gout. Uric acid in the form of sodium in the *materies morbi*. This substance is the result of the imperfect transformation of albuminous substances, due to functional disorder of the liver; while the excess of uric acid is eliminated by the kidneys gout may be absent. Excess of uric acid may set up disorder of the kidneys. In the majority of cases of chronic gout, the increased production of uric acid is associated with defective elimination by the kidneys; the symptoms in gout are due to the action of the *materia peccans* on the nerve-centres. The further exposition of the causes, manifestations of gout, and of hepatic and renal disorders connected with gout, together with the consideration of treatment conclude a volume upon which it would be superfluous, if not impertinent, to express an approval after the pronounced opinion of the profession, as conveyed by a demand for repeated editions.

W. B. KESTEVEN, M.D.

The Student's Hand-book of the Practice of Medicine: designed for the use of Students preparing for Examination. By H. AUBREY HUSBAND, M.B., C.M., B.Sc., etc. pp. 510, small 8vo. Edinburgh, 1888.

THE fourth edition of so compendious a work as this before us, has clearly passed the ordinary lines of a reviewer's work—it has established its position in medical literature, and leaves us little to do beyond the enumeration of its contents. To the student who has not made good use of his hospital opportunities, and has not been content to "walk the wards," such a collection of concise and reliable notes on the practice of medicine must prove of incalculable service, even before and after he shall be called upon to give to a Board of Examiners the evidence that he may safely be entrusted with the lives of Her Majesty's subjects. This work is divided into three principal sections—viz., general pathology, general diseases, and local diseases. Under the first head we find hypertrophy, atrophy, inflammation, and the various forms of degeneration. In the second section are included fevers, septic diseases, venereal diseases, febrile diseases, communicable from animal to man; and miscellaneous diseases, such as rheumatism, gout, diabetes, anæmia, etc. Under the last section are included diseases of the lungs, heart, digestive organs, diseases of the nervous centres, urinary organs, and skin. Tables in aid of diagnosis are introduced into the present edition, together with illustrations of the regions and organs of the body. We have endeavoured to select some one topic for examination or criticism, but feel that we should do justice neither to author or his readers by such selection, where all is so good throughout, as far as it goes. The book is not put forth as a systematic treatise upon diseases and their treatment, but under each section will be found a brief statement of the main points connected with all the diseases enumerated in the nomenclature of the Royal College of Physicians of London. From the point of view of the uses to which this manual is designed, we know of no work that can be put in comparison with it.

W. B. KESTEVEN, M.D.

Short Notices.

A Letter to the Registrar-General on the Increase of Cancer in England, and its Cause. By JOHN FRANCIS CHURCHILL, M.D.

THIS letter attempts to account for "three certain facts."

1. A marked decrease in the mortality from consumption.
 2. An equally marked increase in the number of deaths from cancer.
 3. The general empirical, popular, unscientific use and abuse of heterogeneous and dangerous preparations of oxidisable phosphorus. The writer thinks he has proved
1. The dependence of consumption upon a deficiency of the phosphide element contained in the animal system.
 2. The dependence of cancer upon an excess of this same phosphide element. He claims to have reduced the mortality from phthisis by his introduction of the Hypophosphites; but unfortunately cancer is on the increase in consequence of the unscientific use of his discovery. After a perusal of this letter, our readers must form their own opinion as to the scientific value of its statements. We cannot attempt to indicate its facts or its fallacies.

R. S. S.

The Provincial Medical Journal,

JUNE, 1888.

WE are not going to speak about protection for British manufactures, or to touch the vexed question of free trade and fair trade; but simply to ask for protection for the working classes—who are disposed to save, and to be provident—against what may be called legalised robbery and imposition. Amongst the many questions touching the well-being of the working classes, there cannot be a more important one than that affecting their savings. We have of late years heard many useful lectures or speeches by politicians clearly animated by a leading idea to improve the position of the working classes; and in these speeches we find numerous allusions and passages on the importance of thrift and providence, so that the time is favourable for a consideration of a very important part of the question—viz., the machinery by means of which the working classes can invest their savings. It is a very prosaic subject, and may not possess such an attraction as the Disestablishment of the Church or the House of Lords, as land nationalisation, or other burning questions; but yet it appears to us of far more vital importance to the well-being of the people than any of the foregoing.

At the onset, we must express our difference of opinion from those who state that the working classes are improvident. From a very considerable experience in a manufacturing community, we are of opinion that this is far from being true, that the spirit of providence prevails to a far larger extent than we give them credit for. They recognize the wisdom and duty of providing against sickness and old age; and compared with other classes, they contribute a larger share *pro rata* for those objects. They are thrifty, and they are robbed; they are provident, and they are highly taxed for their providence. Opinions count for little unless supported by proof. We shall endeavour, by an appeal to statistics and by some illustrations, to substantiate our position; and if we should succeed in doing so, we hope the next session of Parliament will take the matter up, and devise some means of protecting those who are unable to protect themselves. The providence of the working classes is represented (1) by co-operative societies, (2) by savings banks, (3) by industrial insurance companies, (4) by trades societies, (5) by clubs and benefit societies of various kinds. If we confine ourselves to these various institutions as they exist in the large manufacturing town of Halifax, we think we may say, as far as regards our manufacturing population, *ex uno disce omnes*. Halifax cannot claim a pre-eminence in exhibiting the thrift of its working classes, though it may safely be placed in the vanguard of co-operation. As is well known, it is a large manufacturing town in the West Riding, in which many industries flourish, chief amongst which may be reckoned the manufacture of camlets, worsteds, and other stuffs, besides which many iron, boiler, and other works, are to be found. At the last census the population stood at

78,000. In this town a thrifty population supports co-operative societies, and besides this a large assurance business is done by the industrial companies. Clubs of all kinds exist, some of which have a solid basis, but unfortunately all are not financially sound, the consequence being that after paying for years and years, when the day of trouble comes the box is empty, or the club money is so small as to be entirely inadequate after what has been paid in premiums. We have repeatedly known of cases of great hardship, where club money has been regularly paid for years, and when sickness has come the hoped-for sick pay has not, for the above reasons, been forthcoming. Where the working classes want protection then is against (1) assurance companies and (2) clubs. Assurance companies, as we have repeatedly urged, are deserving of all the support that can be given to them, and it is impossible to over-estimate their advantages, especially to classes who run their lives against their incomes; but assurance companies are—in place of being blessings—curses when they are unstable, and unfortunately the good and bad are in a measure placed in the same category. Industrial assurance depends so much upon individual canvassing that a glib agent can secure business even in the most unsound companies—in companies which pay even 60 per cent. in commissions, which are actually able to reckon their insured by thousands. Protection should come in, though the difficulty exists as to what form it should take. There is a species of Government surveillance already in existence, but it does not go far enough. Essentially a working-class question, it should be worth the attention of the leaders of the people to take up this question, and, waiting for legislation, they should devise some means of instructing the people on the first principles of insurance, so that they might know in what offices to insure, so as to get the greatest amount of return for their money with stability. We believe that the working classes pay more for everything than the middle or upper class. They certainly pay heavier premiums for insurance, and too often their money is simply thrown away to keep others in comfort and luxury. Such a subject as life assurance is of more practical importance to the working classes than the House of Lords, though it may be a trifle more prosaic. LABOUCHERE has done good service in exposing some abuses in connection with industrial assurance—fighting against prejudices, vested influences, and a powerful clique—but he was hardly so well supported as he ought to have been by those who, on other occasions, so blatantly figure as the friends of democracy. What he did is a matter of history—but we fear it is now ancient history.

What is true of insurance is true of clubs. The working classes have some magnificent benevolent societies, and the success attending them has produced imitators. The largest of them thrive and are able to economise and pay substantial sick money and burial fees. The working classes should understand that numbers are very important factors in the success of societies, and that provident institutions with a large accession of members enjoy advantages which cannot possibly be obtained by a small society. We have known of

clubs belonging to certain orders which have had only thirty or forty members. The incidence of sickness in such clubs has been so great as to completely cripple them, and the box has to be closed or the sick pay reduced. Had these clubs been up to the standard they would have been able to have met the exigencies of disease, and to have ensured stability. The question is one admitting of much treatment, and we are only able to touch on the fringe of the subject, which indirectly affects medical men. We hope on another occasion to take it up and more fully develop our views.

We have already recorded some of the observations of Dr. PEYRAUD, Libourne, France, on pseudo-rabies produced by the administration of the oil of *Tanacetum vulgare*, and we may briefly recapitulate what Dr. PEYRAUD has done. In his early experiments he produced symptoms of rabies in rabbits by the administration of oil of tansy; but he went further. He treated four rabbits with the oil of tansy, and then inoculated them with the virus of rabies; but no symptoms of hydrophobia manifested themselves, even nine months after the inoculations, although two test rabbits were killed with the same virus used in the experiments. We have truly said that rabies is a wonderful disease, and that M. PASTEUR has opened out a wide field for experimentation. It is evident that, if Dr. PEYRAUD's experiments be correct, the phenomena of the disease are becoming still more surprising. Dr. PEYRAUD, in the *Journal de Médecine*, of Paris, 6th May, has a further article on the pathogenesis and treatment of rabies, which starts us on another line of inquiry, and opens out still more debatable ground. "My intention," says Dr. PEYRAUD, "is to develop two points in my researches which have not been published: the inutility at first of curative measures, and the necessity of treating the bite. Up to the present I have only spoken of tanacetin or simili-rabies, which I have demonstrated to be non-virulent, of its relation to true rabies, of the prevention of both by chloral, and especially of anti-rabic vaccination, before and after inoculation with essence of tansy, facts of prime importance, since they have led me to the discovery of a chemical vaccine. I verified these facts on more than 200 rabbits this year, and isolated the rabic poison, the odour of which resembles that of essence of tansy." Dr. PEYRAUD's paper is here not very clear. Dr. PEYRAUD next alludes to the value of vaccinal therapeutics. He observes "he now wishes to insist upon treatment more preventable than vaccination—viz., the treatment of the bite itself, or of the artificially inoculated puncture." Dr. PEYRAUD accepts the theory of Dr. DUBOUE, of Pau, that the virus of rabies propagates itself along the nervous system to the bulb; but he adds to this another theory—that it does so by means of a ferment, which multiplies at the expense of a fermentable substance. When the bulb becomes affected death ensues, and confirmed rabies is incurable. Dr. PEYRAUD has tried various remedies, as chloral, essence of tansy, alcohol, etc., but without result. Of course this is all theory, and it is not even new; the nervous hypothesis is very old, as well as the

theory of ferments. We do not find ourselves much assisted by Dr. PEYRAUD's elaborate description of the method in which the virus acts on the nervous system, by means of his ferment and fermentable substance. PASTEUR we know does not accept the nervous theory of DUBOUE, so that here Dr. PEYRAUD and the great French chemist are in disagreement. For the present we must leave this controverted question to hear what Dr. PEYRAUD has to say on treatment. "It results then," continues Dr. PEYRAUD, "that preventive measures alone have a serious action, but there is one more preventive even than the methods of prophylaxis of M. PASTEUR and self—it is the treatment of the bite. We may call it the antiseptic treatment, as it acts by destroying the rabic ferment. This may be done by means of the red hot iron, the potential cauteries, Vienna paste, washing of the wound with all sorts of antiseptics, or by the electro cauterium." Dr. PEYRAUD has performed some experiments which lead him to believe that the virus may be neutralised. He diluted some rabic spinal cord with a crystal of chloral and a little sterilized water, and he found that the emulsion did not produce rabies after injection. Essence of tansy and phenic alcohol had similar action, so that he thinks there already are antiseptics which destroy the virulent properties of the virus. "We must then," he concludes, "seek for these antiseptics, especially for those which disorganise the nervous tissue, and most surely act on the ferment. If we can discover a substance, which, placed on the wound or injected in its vicinity will prevent rabies, and if this substance can be obtained at the chemist's shops, there will be no need for those methods of prophylaxis which have been of late so painfully introduced." This is the most fruitful way, and the one which Dr. PEYRAUD recommends other inquirers to follow. We believe that we begin to see the dawn of a return to common sense in connection with the subject of hydrophobia in France. The lessons of history, and especially of medical history, ought to be instructive, but unfortunately, in these bustling times men have hardly time to read what has been left them by the old writers. Much of the new in modern times is in reality but a repetition of views and theories which have been thrashed out by the old writers. Dr. PEYRAUD's ideas about ferments and treatment of the wound is very old. We need not go any further back than the year 1683, though we might refer to an earlier date to show that the ferment theory was in fashion. MICHAEL ETMULLER then said: "The cause of this disease consists in a certain peculiar ferment, which affects first the spirits and then the blood. This ferment is carried along with the saliva into the wound." MICHAEL ETMULLER was not only a theorist but a practical man, and he recognised two periods of time in the treatment of dog bites. First—that of receiving the first hurt or wound. Second—the supervening rabies. "If taken in the beginning," he says, "it may be cured," and he pins his faith to the red hot iron, or potential cauterium, so much praised in this nineteenth century by the latest writers and experimenters on hydrophobia.

THE pessimistic view on the present position of the medical profession, shared in by so many writers of the present day, is but perhaps part of the general pessimism which prevails as regards the outlook, not only in the profession, but in all that relates to life and its surroundings. Everything is going to the bad; life is not worth living for. Why we only read the other day in one of the misleading organs of public opinion that England was actually in a position inviting invasion; that she had no defences; presumably no navy; a weak army; with guns that burst, and bayonets that bend; the only consolation offered to us being that we had at least one general. This state of opinion, this pessimist view occur at stated intervals. Fortunately no one is a bit the worse for these gloomy prognostications, and we manage to survive, and even thrive. One hundred and twenty years ago England also appears to have been in a very bad condition, for we read in the *Universal Magazine of Knowledge and Pleasure*, published in May, 1768, "that discontent reigned throughout the nation; manufacturers were in a bad state, that workpeople could not live on their wages . . . and that generally the outlook was as bad as it could be." Somehow or other we have managed to pull through since that time; and we have not the slightest doubt that we shall be able to dispel our present clouds. The profession is in a bad way in many respects; there is a general lowering of tone; there is little regard paid to professional ethics; there is a tendency for each man to play his own hand, as it were. This is true, but it is only true in part, and only applies to a certain section of the profession. Unfortunately the profession as a whole suffers from the peccadilloes of those who do not act up to professional customs or traditions, and the profession also suffers from that species of competition which exists in opening dispensaries, whereat medicine and advice can be had for such trifling sums as sixpence and a shilling. The practical question arises, can anything be done to keep those who are inclined to kick over the traces, within bounds? Could we re-establish the waning faith in medical ethics? Could we fix on a definite scale of fees? There should not be much difficulty in answering the above questions in the affirmative if the profession were sufficiently in earnest to take the matter up. There exists a ready formed Association, consisting for the great part of general practitioners, though officered by consultants, which could almost at once settle these matters. The British Medical Association only requires to speak, to issue a pronouncement to declare that such and such things should be done, and to debar from membership all who refuse to abide by its rules. The Medical Council and the Colleges will not take up these questions. Small associations have attempted to deal with them, though their efforts have been fruitless. The British Medical Association at present, in a measure, controls unprofessional actions through the journal, but the opinions expressed in the editorial columns, in answer to letters of complaint, do not carry sufficient weight. It may be, perhaps, too much to expect that the

Council should entertain this proposal, though we fail to see why it should not do so. Individual action is powerless to remedy the evils about which correspondents write. We have pointed out the proper authority and machinery to take up action. It remains for the profession itself to set this machinery in motion.

THE College of Physicians of London have lately passed a resolution that its fellows, members, and licentiates shall not publish articles on medical subjects in the lay press. The discipline of the College has of late years become rather lax, and some of its fellows have used the lay press as a means of auto-advertisement, and by means of articles of a quasi-medical nature have achieved in a few years success which patient years of waiting could not have accomplished, and did not accomplish in the case of many of its fellows. Whether the new rule will work in modern times is a matter of doubt. Men are not disposed at the present day to sit down patiently and wait for practice. Those especially who have the gift of a ready pen will chafe under the restriction, and no doubt try to evade the law. The lay press may indirectly be furnished with an introductory lecture, a scientific address before some society; and the lay press may even copy some of the medical contributions without the authors' consent. The College of Physicians, in issuing this new regulation, presumably went on the plea that it was against the custom of the College to have articles or papers, written by its fellows, published in journals which circulated amongst the people. This plea is not supported by fact, for we can show that over one hundred and twenty years ago in the journals of the time it was common to meet with papers written by fellows of the College. Thus, for instance, in the *Universal Magazine of Knowledge and Pleasure*, vol. xlii., 1768, we find a number of papers on medical subjects written by fellows of the College. In the number for May there is the "History and Cure of a Dangerous Affection of Œsophagus," by H. MUNCKLEY, M.D., Fellow of the College of Physicians. The case is narrated in full, and as she went out of the hospital perfectly cured, Dr. MUNCKLEY no doubt obtained a certain amount of kudos amongst the readers of this journal. In the June number there is an abstract of a paper read at the College on June 23rd, 1767, "On the remarkably good effect of large doses of common salt in an extraordinary case of Worms." The author of this paper was either bashful or not in favour with the editor, as his name is not given. In the April issue there is a most interesting paper by a writer who is better known as a poet than a medical man. It was read at the College on July 6th, 1767, and it is by no less a person than MARK AKENSIDE, M.D. It is entitled: "Of the use of Ipecacuanha in Asthmas." AKENSIDE tells us that "the asthma seems to consist in a stricture or spasm of the bronchia or membranous cells of the lungs, and is usually distinguished by the convulsive, spasmodic, or nervous." He appears to have had good results with his ipecacuanha. He tells of one or two cases in which it was effectual. "The first was a

woman of about thirty, who in the winter of 1762, after a very severe lying-in—being much weakened, and having a cough, along with a difficulty of breathing, which often approached to suffocation—was for some time treated with other medicines, upon a supposition of her being unequal to the fatigue of repeated emetics. But making no progress with castor, or gum ammoniac, or squills, I at last ventured to prescribe half a scruple of ipecacuanha every other morning. She bore very well the fatigue of this method. After continuing with it for three weeks, she was completely cured of her asthma and cough.”

He was equally successful in the case of a man admitted to St. Thomas's Hospital. The editor of the *Universal Magazine* appears to have found out that his readers liked a little medical literature, for he interspersed in his pages numerous extracts from medical papers. He had one correspondent, a Mr. J. Cook, who dates his letters from Leigh, and who writes very learnedly on “The Poisonous Quality of Muscles,” and also in praise of the virtues of Carduus Benedictus. “I am much,” said Mr. Cook, “for reducing medicine to its primitive simplicity, and think the ancients exceed us in some things, though we excel them in others; let us, then, join their knowledge to ours, as the best method to improve the art, and therefore gain credit to ourselves and to our profession.” We are inclined to agree with this sentiment of Mr. Cook's, and also with the following:—“With me this is always a medical maxim, the more simple a medicine is, the more wholesome it is, and a tender stomach, that cannot be reconciled to a compound prescription, may be brought by degrees to a simple one, and that is no small advantage gained.” Carduus Benedictus is no other than the “blessed thistle,” which Mr. Cook extols as being far above all other tonics, in loss of appetite, where the stomach is injured by irregularities, etc. The leaves and seeds alone are used. Gout is a good subject in modern times, for the lay journals, the editor of the *Universal Magazine* evidently found it suitable even then, for we have a long article by a Mr. WARNER, giving a number of remedies. It might be called “WARNER'S Safe Cure for Gout.” History repeats itself, and we presume will do so till the end of the chapter, and no doubt the articles of the fellows, members, or licentiates of the College will somehow or other still find their way to the lay journals.

Annotations.

“Forsan et hæc olim meminisse juvabit.”

THE PAY SYSTEM IN HOSPITALS.

WE thoroughly agree with the views expressed by Sir S. Waterlow at the meeting of the Hospitals' Association. “Speaking after twenty-five years' experience in the management of Hospitals,” said Sir Sydney Waterlow, “there would be great difficulty in introducing the pay system, nor did he think it would be wise to attempt it, especially

in London hospitals. There were always more applicants than there were beds at the disposal of the authorities, and if paying patients were to be admitted it would only be to the exclusion of poor people who could not pay. If they could begin *de novo*, he would like to see pay hospitals and entirely free hospitals distinct institutions; but it would be very unwise to attempt to introduce the pay system into those institutions already existing.” Mr. Carr Gomm, Chairman of the London Hospital, supported the speaker and said: “The London Hospitals were intended for the poor.” We are pleased to find that their *locus standi* is to be preserved.

NURSING AS A PROFESSION.

THE *Philanthropist* says:—

A probationer's training at the Nightingale Home at St. Thomas's Hospital, London, means three years of hard work, fatiguing bodily labour, and often great anxiety; work for fourteen hours a day, and sometimes more, with only a few hours leave during the week, the probationers living under strict rules, and being expected to obey a rigid discipline.

Surely there must be something wrong in a system of training which requires fourteen hours work daily for training for a profession in which health is a prime element, and which has to deal with health. We hear of probationers breaking down during their course of instruction, and if the above paragraph be true, it is not to be wondered at.

THE CERTIFICATION OF LUNATICS.

THE case of *Stafford v. Colthart and Wood*, tried before the Court of Queen's Bench, furnishes another illustration of the dangers attending the certification of lunatics.—The Plaintiff, the widow of a surgeon in her Majesty's service, sued the medical attendant and the chaplain and schoolmaster of the Epsom Benevolent Medical College, of which she had been an inmate, for damages in connection with her having been removed from that college as a pauper lunatic. The Jury answered a number of questions which his Lordship put to them. His Lordship asked them to give their opinion whether Mr. Colthart, in giving the certificate, had acted maliciously.—The Jury said that they thought that Mr. Colthart did not exercise due and proper care and caution, but that he did not act maliciously.—His Lordship further asked them to assess the damages, in the event of it being held that the Plaintiff was entitled to recover, and they assessed the amount at £35 as against Mr. Colthart.—Though having a strong opinion himself, the Judge said he should leave it for either party to move a Divisional Court for judgment as regarded Mr. Colthart. As regarded Mr. Wood, there was no evidence that he had interfered in removing the Plaintiff to the workhouse. He therefore gave judgment for him, but should the case be carried no further, then that judgment would be without costs. If the case were carried further, then the costs would be in the discretion of the Divisional Court. He most earnestly recommended that there should be no further litigation.

THE SWEATING SYSTEM.

THE exposures on the sweating system have startled the country. Nothing better has been written on the curse as it effects tailors than the following lines, which appeared in *Funch* :

"In the sweat of thy brow shalt thou eat thy bread!"

What hideous echo from mocking lips
Rings through this den of despair and dread,
Where the hot fume mounts and the dank steam drips?
What devilish echo of words divine?
Oh, gold hath glitter and gauds are fine,
And Mammon swaggers and Mode sits high,
And their thrones are based on *this* human sty!

"That hole of sorrow," the last dark deep
Of Dante's dream, may no longer keep
Its horrible eminence. Singers sweet
Of buds that burgeon and brooks that fleet
Beneath the touch of the coming Spring;
Come here, cast eyes on this scene—and sing!
Sing, if the horror that grips your throat
Will leave you breath for one golden note;
Rave of March in a rhythmic rapture;
Rhapsodise of the coming of May,
Seek from the carolling lark to capture
A lit of joy that shall fire your lay
With a rural jubilation strong to drown
The maddened moan of these thralls of Town.
"Could I command rough rhymes and hoarse!"
The Florentine cried. What keen fierce flow
Of lyric fervour hath fire or force

To search this scene of woe?

The long hours dull and slow
Beat heavily here, like the pulse of pain
In a famished wanderer's failing brain.
Corpse-like gleameth each pallid cheek
Through the lurid flare and the loathsome reek.
'Tis a fight for life, but each laboured breath
Is one step more on the road to death.
Pity the slave in the pathless swamp,
The clutch of pestilence, cold and damp,
Closing, closing, closing still
On panting bosom and palsied will!
But these poor thralls of merciless Trade?—
Sentiment may not contend with law.
Here is a plague that cannot be stayed,

Iron doctrine and learned saw

Bar the way

To a better day.

These slaves *must* sweat for there pitiful pay,
And the Sweater is heaven-born—so they say!
Heaven-born! Yes; who shall dare decline
To yield to Economy's right divine,—

That latest incarnation

Of Cæsarism in sordid flesh?

For souls once tangled in Mammon's mesh

There's no emancipation.

Sew on, sew on, in the glare and reek,
Ye men unmanned, and ye women meek,
With back low-crouching, and bloodless cheek!
Sew on, sew on, whilst the gaslights flare
Through the stifling steam and the tainted air!
The jungle-scourge's loathsome lair
Is scarcely fouler. What doth he care.
The Sweater smug—so the good round gold
From his human furnace is hourly rolled?

For him ye toil, for his gain ye tire.
Your lives are fuel to feed his fire.
His the new Alchemo—Mammon's own,
Trade's trick is transmutation.
Commerce hath found the Philosopher's Stone;
The poor man's need
Is the source and seed

Of Wealth's accumulation.

Fate had its formula, life its plan:
The many *must*, 'tis the few that *can*;
Man's cheapest tool is a helpless man.
Can Justice contend with Supply and Demand;
So the Sweater heateth throughout the land

His furnace fierce.

Yet a cry will pierce

Now and anon through the tainted air
From the tortured creatures in torment there;
A moan of sorrow, a piteous prayer;
Questioning faint if the bloated purse
May claim to alter the primal curse

At its own sweet will and pleasure;

To shift its weight by an artful gloss
Till Poverty's share is the pain and loss,

And wealth's the ease and leisure;

Till, in Sweater's fashion, the text is read,

"In the sweat of *their* brow shall they earn *my* bread!"

THE NEW MEDICAL CLUB.

A MEDICAL CLUB ought to succeed; and we have every reason to hope that the new venture will turn out more successful than previous experiments have done in the same direction. Country members are admitted on very liberal terms; and as bedrooms can also be secured at the club, this will form an additional inducement to provincials to join the Galen Club. A most successful press dinner was held at the club on April 25th.

A PENSION FUND FOR NURSES.

NURSES, to use an old proverb, should best know where the shoe pinches; and if we may judge from the articles in the *Nursing Record* the scheme for providing pensions does not find favour with them. We must confess that we are in accord with the *Nursing Record*, and we consider that the arguments brought forward in opposition to the scheme appear to us unanswerable. The name "Pension Fund" is in the first place a misnomer, and the rates of premium are out of proportion to the benefits. This does not reflect in the slightest degree upon the actuary who drew up the rates. The promoters of the scheme were actuated by the best of motives, but the practical outcome of their work does not allow us to congratulate them upon their judgment.

THE BALANCE SHEET OF THE BRITISH MEDICAL ASSOCIATION.

BALANCE sheets are not usually very closely scanned, nor are they inviting documents. The members of the British Medical Association may congratulate themselves on the state of their receipts, but there are a few of the items of expenditure to which the attention of the members might be usefully directed. We give revenue or profit and

Medical Staff; Imlin Chalmers, M.D., 5th Vol. Batt. Light Infantry; William Duncan, London Rifle Volunteers; W. Moir, M.D., 2nd Vol. Batt. Highland Light Infantry; W. H. B. Crockwell, M.B., Manchester Volunteer Medical Staff; J. W. Richardson, 1st Vol. Batt. Norfolk Regiment; R. B. Porteous, M.D., 2nd Lancashire Volunteers; J. R. J. O'Callagan, 1st Flint Artillery Volunteers; F. J. Walker, M.B., 1st Vol. Batt. Lincoln Regiment; A. D. McDowrie, M.D., 1st Vol. Batt. King's Own Scottish Borderers; James Turton, 1st Vol. Batt. Royal Sussex Regiment; J. A. Mackenzie, M.B., 4th Lancashire Volunteers; E. W. Symes, M.D., Yeomanry. We are pleased to find that the volunteer medical officers are responding like all other members of the volunteer force to the call made upon them, in view of any grave national emergency. The other officers in the volunteers will have to make personal sacrifices should a contingency arise for the calling out of the volunteer force, and they are prepared through patriotic motives to accept the new conditions imposed upon them. It would have been in the highest degree a reflection on the medical officers if they alone stood out, to fight for terms, and we should have been classed as a mercenary body. We do not share in the bogus scare raised by the *British Medical Journal*, and consider the advice given by our contemporary misleading.

New Remedies.

In a paper describing the native remedies used by the inhabitants of Porto Rico (*Pharmaceutical Journal*, vol. xviii., p. 906), Dr. Amadeo has directed attention to the value of some of them, which are as yet unknown in Europe. Of these may be mentioned *Phyllanthus Niruri*, of which he states that he has often proved the efficacy in the treatment of intermittent fevers. He has used it in the form of tincture, of which two drachms were given in the morning. He found that when the dose is repeated it acts as a slight purgative, and that the infusion taken cold acts as a diuretic. In inveterate intermittent attacks, with infarctus of the spleen and liver, this remedy proved very useful. It is also worthy of note that the same plant is used in India as a diuretic in gonorrhœa and acidity of urine, and that Hindoo physicians prescribe it also as a deobstruent in jaundice, etc. The milky juice of the plant is used as a healing application to offensive sores, and a poultice of the leaves with salt is employed to cure scabby skin affections. It thus appears to be esteemed in the eastern as well as the western hemisphere.

Mammea Americana.—The resin and decoction of the bark of this tree have long been esteemed in the West Indies as an excellent remedy for the cure of parasitic skin diseases. Dr. Amadeo states that he has employed, with the best results, a decoction of the bark in the phagedenic sloughing ulcers of the tropics. The part is frequently washed, and lint, wetted with the decoction, is applied to the ulcer. The properties of the bark appear to depend upon tannin, and a resin possessing stimulant, and probably also antiseptic powers.

A third plant that seems worthy of notice is *Boerhavia scandens*, a climbing plant growing by the sea-side, and belonging to the natural order *Nyctaginaceæ*. A decoction of the root is used in gonorrhœa, without any other remedy. The decoction is made in the proportion of one ounce of the root to a pint of water, and the dose is a wineglassful of the strained decoction every hour during the day.

The leaves of *Xanthoxylum Caribæum*, a tree very abundant in some parts of the island of Porto Rico, appears to resemble jaborandi in its medicinal properties, the decoction of the leaves acting as a powerful

diaphoretic. The bark, which is very bitter, is given as a tonic in anæmia. It appears to contain berberine.

A new hypnotic has recently been introduced to the notice of the medical profession by Professor Kast, in a communication to the *Berliner Klinische Wochenschrift*. The chemical name for the new preparation is *Diethyl-sulphon-dimethyl-methane*, which for the sake of conciseness has been abbreviated in *Sulphonal*. It is described as being without odour or taste, forming colourless heavy prismatic crystals, melting at 130 to 131°, and boiling at about 300°, almost without decomposition. It is soluble in eighteen to twenty parts of boiling water, but in cold water to the extent only of rather less than 1 per cent.

It is, however, readily soluble in alcohol, or ether containing alcohol. It is remarkably stable and indifferent to powerful reagents, being scarcely affected by hot concentrated sulphuric acid, aqua regia, fuming nitric acid, chlorine or bromine. It is said to have produced good results in a large number of cases, as a hypnotic inducing physiological sleep without any ill effects upon the heart or other organs. The dose given to women was one gramme, and to strong men three grammes. It is found most convenient to administer it in the form of powder, which is enclosed in wafers and given early in the evening.

The so-called "muscle buttons," alluded to in a former number of this journal, have been shown by Mr. Henning, of the Berlin Botanical Museum, to belong to a genus of the cactus family, and to form a new species, to which he has given the name of *Anhalonium Lewini*. The plant has been investigated by Dr. Lewin, and an alkaloid has been detected in it, for which he proposes the name of *Anhalonine*. The active principle appears to be soluble both in water and alcohol. It causes symptoms of collapse, followed by reflex excitability and tetanic convulsions. In pigeons these symptoms were preceded by vomiting. Dr. Lewin thinks that the properties of the plant may possibly find some therapeutic application.

A combination of *Amido-propionic acid* or *alanin*, known as alanin-mercury, has been found by Professor de Lucca, of Catania, to be superior to all other preparations of mercury for subcutaneous injection in cases of syphilis. It is prepared by dissolving one part of alanin in twenty of water, heated gradually until it boils. To the boiling solution bromide of mercury is added, a little at a time, until no more dissolves. The solution is then filtered and evaporated. The alanin-mercury forms dull white acicular crystals. The quantity administered hypodermically is five milligrams, dissolved in a cubic centimetre of water. In infantile syphilis, for which it seems peculiarly suitable, two to five milligrams were given daily. In a very few cases abscesses were produced in adults. The cures produced by alanin-mercury are stated to have been permanent.

The principle contained in the leaves of *Eriodictyon glutinosum* (*Yerba Santa*) to which the property of covering the bitter taste of quinine was attributed by M. Rother, and which was said by him to be a resinous body, has been re-examined by M. Quirini. He has obtained the principle, to which the name of eriodictyonic acid has been given, in a purer condition by treating the alcoholic extract of the plant with boiling water. Upon cooling, a light yellow crystallization of the acid forms, mixed with a green resinous body, from which it can be separated by means of a dilute alkaline solution, in which it dissolves with a red-brown colour. Thus purified it forms delicate yellow plates, melting at 86 to 88° C., very hygroscopic, having a sweet-sour taste but a neutral reaction. By perchloride of iron it is precipitated of a reddish-black colour, but its solution is not affected by acetate of lead, copper sulphide, corrosive sublimate, gelatin or tannin. It is supposed to be a phloroglucin. The acid has been obtained to the extent 2 to 4 per cent., and has been used successfully in quinine pastilles, to mask the bitterness of the latter.

Another arrow poison has lately been investigated by M. Arnaud. It is prepared by the Somalis from the roots and wood of a tree growing wild on the slopes of the Somali mountains. This tree, called ouabaia by the natives, has been determined to be closely allied to the *Carissa Schimperii*, an apocynaceous tree growing in Abyssinia, but differing from it, in having the flowers arranged in small dense cymes at the top

of a common peduncle 8 to 12 inches long. M. Arnaud has obtained from the wood of the plant a very poisonous crystalline glucoside, of which two milligrams were found to be sufficient to kill a dog weighing twenty-six pounds. The formula given for the glucoside is $C_{30}H_{46}O_{12}$. It has been named ouabain. The crystals are in the form of thin rectangular lamellæ, not appreciably bitter, very soluble in boiling, but only slightly in cold water; soluble to a moderate extent in rectified spirit.

It is insoluble in absolute alcohol, ether, and chloroform. It is precipitated by tannin from aqueous solutions. It does not seem to act as a poison when taken into the stomach, but acts powerfully on the heart when introduced directly into the circulation. The bitterness of the aqueous extract of the wood does not appear, therefore, to be due to the poisonous principle.

Dr. A. Rovighi, of Bologna, states that he has found strophanthus to have an appreciable action in lowering the temperature. In a case of typhoid fever he observed that it eased headache, lessened the quickness of the pulse, produced a feeling of comfort in the patient, and did not in any instance give rise to symptoms of collapse. Dr. V. Martini, however, of the University of Siena, has tried strophanthus as an antipyretic with absolutely negative results. It therefore remains to be proved whether the same kind of strophanthus was used in both experiments. That used by Dr. V. Martini is stated to be identical with that employed by Professor Fraser, but the kind used by Dr. A. Rovighi is not mentioned. It is quite within the limits of possibility, therefore, that a different species has been used by him, or even the seeds of *Kickxia Africana*, which have been sent to this country as strophanthus. It has already been shown in the case of aconite that two nearly-allied species (*A. Napellus* and *A. Fischeri*) have a different physiological action, and the same may be the case with strophanthus.

Some cases of idiosyncrasy with regard to antipyrin have been recorded in the *British Medical Journal*, in which symptoms of severe coryza followed the use of the drug. In one of these cases the antipyrin was given to relieve an attack of migraine. Antifebrin was subsequently given, with relief to the symptoms, so that the latter would appear to be capable of being used in migraine without causing the unpleasant symptoms produced by antipyrin.

Inhalation of amyl nitrite has been found to be the best antidote to cocaine-poisoning, followed by subcutaneous injections of ether (*British Medical Journal*, April 7th, 1888, p. 757).

Dr. T. Jackson, of Hull, states (*British Medical Journal*, April 20th, p. 901) that he has found tincture of strophanthus of value in a case of mitral regurgitation, and in another of aortic valvular disease. In the former case the patient appeared to be *in articulo mortis*, but after taking tincture of strophanthus he had free perspiration and diuresis, recovered, and had been better for nine months.

Dr. C. W. Suckling reports that *Phenacetine* in his hands has proved quite equal to antipyrin, although it is not nearly so powerful as antifebrin. It has the advantage, however, of not causing any disagreeable after-effects when given in moderate doses. He has not observed rigors follow the use of phenacetine, as they do that of antipyrin and antifebrin. Nevertheless, he remarks that sponging with tepid or cold water is far more effective and agreeable than any antipyretic drug, as it not only reduces the temperature, but relieves thirst, induces sleep, and is agreeable to the patient.

Periscope.

I.—GLEANINGS IN MEDICINE.

By W. B. KESTEVEN, M.D.

The Treatment of Perforations of the Tympanum (*Journal de Médecine de Paris*, April 22nd, 1888).—Dr. Polo states that he has met with great success in the use of the fresh pellicle of the egg in closing perforations of the tympanum. The grafting of such a thin organised substance excites no irritation, and may be retained for a long time; as long as ten months. The application of the membrane is difficult, and

requires skill. The use of gold beater's skin has been practised for this purpose a long time in Paris, but it remains as a foreign body, and does not permanently adhere, whence it becomes a source of irritation at the bottom of the meatus.

Double Uterus as a Cause of Difficult Labour (*Centralblatt für Gynäkologie*, April 14th, 1888).—Dr. Eugen Tauffer relates of dystocia in connection with the existence of a double uterus (*uterus didelphis*), the following conclusions:—That this case presented one of the most perfect forms of double uterus. That both uteri had both been simultaneously pregnant, and that even superfetation may have occurred. That the presence of the second pregnant uterus would offer the same difficulty in labour, as a small ovarian tumour. That if one uterus be unimpregnated, a decidua may be formed, and expelled by contractions simultaneously with those of the impregnated organ. Hæmorrhage, in this case, may erroneously be looked for in the impregnated uterus.

Case of Extra-Uterine Fœtation of Thirty Years Duration (*Centralblatt für Gynäkologie*, April 14th, 1888).—The following case is quoted from the *Boston Medical and Surgical Journal*, August, 1887:—The subject of this report was in her second pregnancy, notwithstanding which menstruation continued. She suffered from repeated attacks of a febrile character, with abdominal pains and tympanitis. At the expected termination of gestation, reckoning from the date of quickening, she experienced the most violent fetal movements, but there were no labour pains. These movements continued for fourteen days, and gradually subsided altogether. During the next ten years the woman was an invalid, suffering from jaundice, pains in the uterine region, etc. After this time she completely recovered her health. The abdominal tumour decreased in size, and all pain subsided. The patient died from a tumour in the larynx, thirty years from the date of pregnancy. On *post-mortem* examination of the body the tumour was found to be outside the pelvic cavity, attached to the attenuated abdominal parietes, lying almost loose in the abdomen; the intestines glued together by adhesions, surrounded the tumour; a pedicle consisting of a process of the peritoneum, connected the tumour with the uterus. There was no trace of a placenta.

Influence of Ergotine on the Involution of the Uterus (*Journal de Médecine de Paris*, April, 1888).—Dr. Emile Blanc, of Lyon, raises the question—does ergot of rye accelerate or retard uterine involution? This is the problem which M. Blanc proposes to resolve. Many authorities think that ergot accelerates involution, whilst others, a smaller number, are of a contrary opinion. M. Blanc has carried out his investigation in the cases of one hundred women. These he divides into three groups. In the first, comprising forty women, he had not administered ergot. In the second group, also consisting of forty individuals, he had given ergot during the first five days of their accouchement. In the third, consisting only of twelve females, he had administered the ergot for ten days after their accouchement. The ergotine was inserted subcutaneously. The first injection was used immediately after the confinement, and was repeated once or twice accordingly, as the uterus contracted firmly. In order exactly to follow the volume of the uterus, whether submitted or not to the influence of the ergot, M. Blanc took the measurement of the uterus every day, and twice (on the fifth and tenth days) practised intra-uterine sounding. A figure drawn upon the abdominal wall fixed the situation of the fundus, and the length of the organ was measured by a ribbon from this point to the symphysis pubis. The limits of the uterus were ascertained by one or two fingers of each hand. The sounding, effected with a curved catheter, was done under antiseptic precautions. The following are the conclusions at which M. Blanc has arrived:—1. The ergotine administered during the first five or ten days exerted no favourable influence upon the uterine contractions. 2. On the contrary, it was noticed that in many instances the ergot interfered with the regular contractions. 3. The external and internal measurements contra-indicated the employment of ergotine to promote involution of the uterus. 4. The medicine exerted its beneficial influence most distinctly in secondary hæmorrhage, and that nearer to the time of delivery.

Anæmia caused by Tænia Lata (*L'Union Médicale*, April 10th, 1888).—A Russian doctor (Chapirow) relates the case of a youth who was suffering seriously from anæmia, with febrile symptoms, extravasations of blood on the mucous and cutaneous surfaces. The red blood globules were in one-sixth less than their normal proportion. The examination of the evacuations showed a large number of ova of *Bothriocephalus latus*. Following upon vermifuge treatment, the anæmia and its complications rapidly disappeared. The author adds the caution that it may be as well to bear in mind the possible cause of anæmia to be found in intestinal worms.

On Cortical Hemianopia (*Ophthalmic Review*, March, 1888).—Dr. Gowers, in his work on Diseases of the Brain, adopts the term hemianopia as being quite unambiguous, although not etymologically so correct as hemianopsia. Dr. Seguin has collected forty cases due to cortical lesions, as ascertained by autopsy, and also five cases of traumatic origin, without autopsy. These forty-five cases he classes as follows:—Four cases where the lesion was not clearly defined; three cases of lesion affecting parts known to be independent of vision, and where the hemianopia resulted from compression; six cases of lesion of the geniculate body, or of the optic thalamus, or of both; eleven cases of lesion of the white substance of the occipital lobe; five cases of traumatic lesion of the occiput and subjacent cerebrum; sixteen cases of lesion of cerebral cortex, or immediately subjacent white substance. Dr. Seguin gives a *resumé*, and draws the following conclusions:—1. Lesions of the internal surface of the temporal bone, or even of other portions of the base of the hemispheres, can produce hemianopia indirectly by compressing the primary optic centres. 2. That lesions of the lateral geniculate body, or of the postero-lateral portions of the optic thalamus, can cause hemianopia, accompanied by hemiplegia. 3. That a lesion of the white substance of the occipital lobe on the most posterior fibres of the internal capsule can produce hemianopia; 4. also, lesions of the inferior lateral lobule. 5. That a more extensive lesion may produce, when on the left side, aphasia, hemianopia, and hemiplegia. 6. Lesions of the white substance of the occipital lobe produce blindness when bilateral, hemianopia when unilateral. 7. Lesion of the cuneus and occipito-temporal convolutions produce hemianopia of the opposite side.

On the Nutrition of the Vitreous Humour (*Ophthalmic Review*, March, 1888).—M. Leplat (*Annales d'Oculistique*) describes experiments, from which he concludes that the nutritive fluids of the vitreous are secreted by the ciliary body, a conclusion already arrived at by previous experimenters; but he emphasises the statement that it is from the ciliary body *alone* that these fluids come. From this point the current travels backwards, and that portion which enters the central canal of the vitreous flows rapidly towards the papilla. The maximum of saturation by iodine of the anterior portion of the vitreous is reached in seven hours, and then gradually diminishes simultaneously with a maximum saturation of the layers more posterior; in other words, the iodine enters the vitreous body anteriorly (at the ciliary processes), and leaves it posteriorly (at the papilla). Leplat asks whether his results will bear a different interpretation; whether, as Ulrich and Panas suggest, the whole uveal tract supplies the vitreous with nutritive fluid, and not alone the ciliary body? Certain clinical facts seem to favour this latter view. In choroiditis, not involving the ciliary part, opacities are met with in the vitreous; in myopia the posterior layers of this humour are sometimes liquefied. It is an admitted fact that the rods and cones derive their nourishment from the choroid, but it is difficult to imagine that nutrient fluid should traverse the retina, which has a quite separate blood supply, in order to reach the vitreous; if so, it should contribute to the nutrition of this tunic (the retina), which it clearly does not, as is evidenced by the loss of transparency and function which result from embolism of the central artery.

A New Pathogenic Conception of Croup and Diphtheritic Angina (*Le Concours Méd.*, November 5th, 1887; *Archives of Pediatrics*, Philadelphia, April, 1888).—M. Morot's belief is that croup and diphtheritic angina are manifestations of the uric acid diathesis, under the form of pharyngo-laryngeal congestion, which is favourable to the production of false membrane. This false membrane finds in the congested tissues a series of conditions which are suitable to its germination and propagation. As proofs of this theory the author cites the congestion of the liver, spleen, and kidneys, which co-exists with diphtheria, and he has been able to show each day, in cases observed at Vichy, a correlation between the congestion of the liver, spleen, and kidneys, and the pharyngo-laryngeal congestion, which is manifested in the form of coryza, pharyngitis, and laryngitis. The congestion of the viscera in question is due to a predisposition on the part of the patients to arthritic troubles, and this is encouraged by bad hygienic arrangements, especially as they affect the alimentary canal. The chronic congestion of the liver interferes with hæmatosis by the consequent overcharging of the right lung, and the blood is thus vitiated by an excess of uric acid, which the congested kidneys no longer eliminate. Then the vitality is enfeebled, and the child becomes an easy prey to the microbes which attack the respiratory apparatus, because the pharyngo-laryngeal congestion has prepared the soil for them. To the objection which might be offered that many children in perfect health are attacked by diphtheria, the reply is made that this apparent health is fallacious, and that a careful examination would show that this is the case. The treatment which is proposed by the author, in view of his extraordinary theory of pathogenesis, is as follows: Local treatment, the removal of the false membrane is a matter of secondary considera-

tion, the principal end should be to relieve the liver and spleen of their congestion, and by *contre coup* the pharynx and larynx. This end is to be obtained by using cauterisation upon the hepatic area every hour or two by means of the monohydrated nitric acid, or if this cannot be obtained, by using small blisters over the same area. The formation of false membrane upon the blistered surfaces need not excite apprehension, in his opinion. For internal medication he recommends the use of the sulphate of quinine for relieving the congestion of the spleen, and strychnia for relieving the congestion of the liver and counteracting the atony of the vessels. Alcohol should not be used, as it tends to increase the hepatic congestion.

Removal of a Needle from a Bronchus (*L' Union Médicale*, April 8th, 1888).—The stethoscopic signs consisted in a diminution of the respiratory sounds with a distinct *souffle*, audible between the vertebral column and the right scapula. A sensation of pricking was felt about the level of the fourth costal cartilage, on the right side. The patient, fourteen years of age, was put under chloroform, and tracheotomy was performed. Dr. Piéniazek succeeded in reaching the end of the right bronchus with a pair of polypus forceps, through the wound in the trachea, and extracted the needle, which had fallen into the respiratory passage four days previously. Violent cough, with sanguineous and purulent expectoration, followed the operation. This, however, rapidly subsided, and the patient was able to leave her bed a week afterwards. In a bibliographical summary, the author indicates the direction of the primary divisions of the bronchi which determines the direction of the fall of foreign bodies in the trachea, towards the right side, and gives instructions respecting the introduction of suitably-formed forceps for their removal.

II.—NOTES FROM RUSSIAN AND POLISH JOURNALS.

BY VALERIUS IDELSON, M.D., BERNE.

Zittmann's Decoction in Syphilis.—Dr. I. Tcherniavsky, of Warsaw, details an interesting case (*Warsaw Opatzowsky Military Hospital's Reports*, vol. i., part 1, p. 67) of syphilitic ecthyma cured by Zittmann's decoction. A strong and well-nourished hussar, æt. twenty-two, was admitted with a typical primary sclerosis in the retro-glandular sulcus of the penis of four weeks' standing, and a considerable enlargement of the inguinal, cubital, and cervical lymphatic glands. Under the influence of a sublimate corrosive lotion, the ulcer soon healed; but on the nineteenth day after his admission there appeared numerous big papulæ over his lower limbs and body, accompanied by fever (39.5° C), rigors, malaise, and violent headache. From the twenty-fifth day some papulæ began to transform into pustules, while his fauces became congested, and the tonsils covered with mucous papuloid patches. On the thirty-sixth day, a general treatment (consisting of daily rubbing in half a drachm of gray mercurial ointment) was commenced. After fifty-two inunctions the papulæ underwent resorption, but the man's voice remained hoarse and barking. On the 160th day there suddenly broke out numerous lenticular papulæ over his chin, lips, front-head, and scalp, malaise and violent headache reappearing. In spite of mercurial inunctions and hypodermic injections of sublimate corrosive (in one-sixth of a grain doses), all the facial papulæ gradually and steadily transformed into extensive and deep pustules. In view of these failures, which had been exasperating both the patient and the doctor, Dr. Tcherniavsky resolved to give a trial to Zittmann's decoction. On the 192nd day the man was removed to a warm ward (22° Reaum.), and ordered to drink every morning one fluid pound of an unwarmed *decoctum mitius*, and every evening as much of a warm *decoctum fortius*. Having imbibed the latter, the patient used to go to bed, and to perspire freely under woollen blankets. Every fifth day he took a warm bath (30° R.), but no decoction. "A truly brilliant result was obtained already after a seven days' treatment; all scurfs fell off, suppuration strikingly lessened, any marginal infiltration melted away, and a rapid cicatrization (starting from the periphery) followed." About the twenty-first day of the treatment the former deep ecthymata were found to be represented "only by rosy scars," and the patient could be at last discharged well and strong, after a 213 days' stay. Dr. Tcherniavsky adds that he met several similar cases where Zittmann's decoction produced a beneficial impression on the syphilitic process. He "does not entertain any doubt that its action must be attributed to its powerful diaphoretic and laxative properties, which cause a considerable increase and acceleration of the systemic metabolism and, in virtue of this, promote rapid resorption and elimination of syphilitic products, the effect being intensified by a specific remedial action of mercury present in the decoction (*fortius*)."

[Modern practitioners are far from being unanimous in their opinions in regard to the therapeutic value of the old remedy under consideration. Thus, Professor Zeissl, of Vienna, thinks that all deco-

tions generally manifest but an exceedingly trifling influence on the involution of the morbid process. Professor E. L. Lanceraux, of Paris, similarly relegates Zittmann's decoction to the category of insignificant auxiliary resources. Meanwhile, Professor Veniamin M. Tarnovsky, of St. Petersburg, in his translation of Lanceraux's text-book, adduces (p. 713) a striking instance of extremely severe syphilis cured by the remedy after all other means in vogue have failed. Again, Professor Alexander H. G. Gay, of Kazan, most decidedly raises his authoritative voice in favour of the decoction: "The action of Zittmann's decoction," he says, in his "Course of Venereal Disease" (third edition, 1888, p. 555), "is sometimes strikingly beneficial. Under its appropriate administration the patients show a rapid improvement, regain a good appetite and a healthy complexion, and commence to increase in their weight, while their seemingly intractable ulcers, which have been previously resisting all possible means, become cleaner and generally more healthy, and soon heal altogether." The use of the remedy is said to be indicated mainly in late forms of syphilis, especially in patients gravely exhausted, both by the disease itself (ulcers) and a prolonged (and possibly irregular, or wrong) treatment. Dr. Gay advises to use the strong decoction (*d. fortius*), commencing with ten or twelve fluid ounces (divided into three equal portions, two of which are to be taken warm in the morning, in the course of fifteen or twenty minutes, and the third in the evening), and ascending gradually to one and a half or two fluid pounds, provided the patient tolerates it well. The patient's diet is to be light, easily-digestible, and nutritious. The treatment must last not less than one or two months. The beneficial action of the preparation is ascribed by Dr. Gay partly to its favourable influence on the patient's digestion and nutrition, and partly to its containing mercury. In which chemical state mercury is present therein, remains yet undetermined. At all events, it exists in the decoction in some combination which is easily tolerated by the stomach, and rapidly passes into the blood current, since Vajda and Paschkis were able to detect mercury in the patient's urine already on the second day of the use of Zittmann's remedy. That the latter does contain mercury has been proved beyond any doubt also by Schneider and Zantl, who, on one side, observed mercurial stomatitis after the use of the decoction alone, and, on the other, obtained mercury in a direct way from the decoction. Thus, according to Zantl, 720 grammes of the strong decoction contain 0.0125 grammes of mercury in the shape of corrosive sublimate. Professor Kaposi, of Vienna, also finds (*Sprimon's Medicina* in 1886, vol. ii., p. 989) Zittmann's decoction "a very effective means in late forms of syphilis."—*Reporter.*

Hypodermic Injections of Calomel in Syphilis.—In the *Vratch*, No. 8, 1888, p. 148, Dr. Nikolai N. Riisanoff, of Novokhopersk, writes that having employed Scarenzio-Smirnoff's method in a great number of cases of syphilis, he has come to the following conclusions: 1. The method is very convenient, not only in the hospital practice, but also in out-door patients. 2. The best results are obtained in inveterated neglected forms of the disease. 3. Since a maximal effect is produced by the very first injection, the method may be usefully employed also as an auxiliary means for a differential diagnosis in doubtful cases. A single injection of calomel in a non-syphilitic person is said to be entirely free of any injurious effects. Dr. Riisanoff used to inject calomel in the dose of three grains every three or four weeks. For the sake of illustration he adduces two of his cases, referring to the male peasants with severe squamous *lichen syphiliticus* of several years standing. In one five, and in the other three, injections of the salt permanently cured the patients, after a prolonged treatment by other means had utterly failed.

The Therapeutic Action of Sulphate of Sparteine.—Dr. Pawinski (*Gazeta Lekarski*, January 7th, 14th, and 21st, 1888, and the *Vratch*, No. 9, 1888, p. 174), having carried out an extensive series of very careful observations in thirty-three patients, summarises his experience as follows: 1. In small doses (from $\frac{1}{4}$ to $\frac{1}{2}$ gr. *pro dosi*, from 1 to $1\frac{1}{2}$ gr. *pro die*) sulphate of sparteine increases the energy of the cardiac contractions, and, while retarding the cardiac rhythm and raising the arterial tension, makes the heart's action more regular. In moderate doses (from 1 to $1\frac{1}{2}$ gr. *pro dosi*) it does not produce any regulating influence on the heart. In large doses (from $1\frac{1}{2}$ to 2 gr. *pro dosi*, from 12 to 16 gr. *pro die*) it produces a paralysing action on the cardiac muscle, and gives rise to the appearance of a slow, weak, arrhythmic pulse. "The small doses excite, the large ones paralyse, the vagus." 2. The strengthening action of sparteine on the heart, however, is inferior to that of digitalis. 3. In small and middle doses the drug increases the tone of blood-vessels. 4. Its action becomes pronounced within thirty or forty minutes after taking a dose, and lasts for four or five hours. 5. Sparteine is a mild hypnotic. 6. It does not possess any cumulative action. 7. It does not disturb the gastro-intestinal functions. 8. Its diuretic effect is but slight, and occurs only in those cases where there exists solely a functional disturbance of the heart without any

anatomical lesions. 9. Only small doses must be used for therapeutic purposes. 10. The drug is indicated, in the first place (*a*) in various functional cardiac disturbances, such as palpitation, oppression, "præcordial anxiety," and such like symptoms as observed mainly in generally nervous, hysterical, neurasthenic, and anemic subjects as well as in excessive tobacco-smokers and alcoholists; (*b*) in those cases of organic cardiac disease where any discomforting subjective symptoms occupy a prominent stand; (*c*) in initial stages of Grave's disease; (*d*) in asthma in patients suffering from pulmonary emphysema and chronic bronchitis; and (*e*) in those cases in which digitalis is not tolerated.

On the Biological Action of Thallin, Antipyrin, Antifibrin, and Kairin.—Having carried out a long series of experiments on healthy dogs in the Kazan Pharmacological Laboratory, Mr. Limanoff, a veterinary practitioner, has arrived at the following conclusions (*Vratch*, No. 5, 1888, p. 91). 1. When used alone, in a healthy animal, thallin depresses the temperature only very slightly, but quickens the pulse and lowers the blood-pressure. 2. Under the same circumstances, antipyrin does not lower the temperature, but induces vomiting. 3. Antifibrin considerably depresses the temperature, quickens the pulse, and lowers the blood-pressure. 4. Kairin does not lower the temperature, but accelerates the pulse, and gives rise to convulsions. 5. When used simultaneously with those remedies which manifest an intoxicating action on the nervous system (such as morphia, chloral hydrate, wine spirit), the antipyretic agents under consideration lower the temperature by far more powerfully than when given alone. 6. A retardation of the pulse as caused by digitalis does not produce any influence on the antipyretic effect of antifibrin. 7. The same is true in regard to an inhibition of all glandular secretions by a preceding administration of atropia.

III.—MEDICAL AND SURGICAL MEMORANDA.

BY G. F. CADOGAN-MASTERMAN, M.D.

Reduction of a Partial Dislocation of the Neck.—One sunny afternoon in September, 1886, I was stopped on my way in a country lane with an urgent request to see a man who was said to have just met with a serious accident. He lay in a neighbouring house, which I reached in a few minutes. I found a well-built, middle-aged farmer, sitting partially undressed at the foot of his bed, and with one of the most ghastly countenances imaginable. His face was perfectly colourless; the spasmodically retracted lips whiter than the clenched teeth, cadaverously cold and covered with beads of sweat; the eyes were wide open, staring with dilated pupils, and expressive of the utmost anguish and terror. He was panting rather than breathing—the breath hissing in short, quick gasps between the closed incisors—and his chief effort seemed to be, with rigid arms and hands tightly grasping the bedstead, to keep his body upright and immovable. In a few words I learned from his wife that he had been gathering pears at the top of a ladder, about twenty feet high, placed on sloping ground; that it had slipped and turned over, and that he had fallen, head downwards, on the back of his neck, and had been unable to speak since. The diagnosis was made at a glance, and a projection, sensible to the touch, of the fifth cervical vertebra confirmed it—the neck was partially dislocated.

I called in my coachman, told him to kneel on one side of the man as I did on the other; we grasped his head with our hands and lifted him bodily upwards. I felt no jerk, nor had I expected it, but the immediate exclamation, "That's all right!" and a deep sigh of relief, showed that we had succeeded. He was then carefully laid supine in bed, with a heavy brick wrapped in flannel—afterwards replaced by a sand-bag—on either side of the head, his clothes cut and drawn away, a dose of opium given, and he was kept for a week afterwards in the same position and as quiet as possible. Very shortly after the reduction the breathing became natural and the face hot and flushed; the neck was stiff and painful for several days. The shock of the accident did not pass off so quickly as its immediate effects. For some months the man looked pale and ill, with a startled, apprehensive expression of face as if he were always dreading some fresh mishap; at the present time, (1888) however, he is quite well.

Significantly enough I had to see, a week afterwards, a second very similar accident, and near the same place (Astley, Worcestershire). A lad fell off a loaded wagon, hardly more than half as high as the ladder top, but fracture of, I believe, the first dorsal vertebra ensued, with complete sensory and motor paralysis of the trunk, and death within four hours.

Temperature as a Factor in Acute Disease.—In the April number of this journal (p. 182) I gave a condensed translation of a most suggestive paper by Dr. Unverricht, of Jena, on "The Modern Treatment of Fever" with especial reference to the method of drug-refrigeration. He considers this mode of treatment, which is now so much in fashion, to be founded on untrustworthy and imperfect premisses, generally

useless, and often positively injurious by its interference with a natural process of eliminative destruction which would result, if left alone, in the death of the real or assumed bacillus and the recovery of the patient. He contends that we have no proof that a high temperature is necessarily fatal or *per se* dangerous to the patient; it may be an indication or a concomitant of conditions of the utmost peril; but, if so, reducing the temperature does not remove, and sometimes does not even affect those conditions in any way; the state of the patient may be not one whit the better, and death ensue just as certainly, although the temperature may have been reduced by the aid of some antipyretic down to the normal point. The statistics of Reiss give a sufficient proof of this. He stated that many of his typhoid cases—thanks to calina—showed no pyrexia whatever, but the mortality reached 26 per cent. of the total. Relying upon the results of the researches of Pipping on the effect of heat on microbial life Unverricht believes that a temperature of 104° or 105° is far more injurious to the bacterium than to the patient, and that the excessive heat which the presence of the former induces is the most potent agent for its own destruction. It is true that the temperature of pneumonia is not immediately fatal to it, but it diminishes its lethal vitality so far that it ceases to grow and multiply, and must surely render it a more easy prey to the antagonistic leucocytes. As an illustration, if not a corroboration of this view, I may refer to a practical point in the manufacture of vinegar by what is known as the German process, which broadly consists in dispersing a shower of very dilute alcohol in a current of air in the presence of the *Bacterium aceti*, an organism which has the property of converting the spirit into acetic acid just as sugar is split up into alcohol and carbonic acid by the growth of the *Torula cerevisia*. When I was a student at the Royal College of Chemistry we were taught by von Hoffmann that the former change was one of simple oxidation, but Pasteur has conclusively shown that this is not the case; free oxygen must be present, but the metamorphosis can only take place when the living and active bacterium is present also. As one result of this oxidation the temperature rises very rapidly, and this, if not checked, would soon bring the process to an end, not by injuring the vinegar, but by paralysing the microbe. In some large works, under the care of a gentleman of high scientific attainments, I find he watches the thermometer as anxiously as we do when the index gets above 104° in a patient's axilla. And it is most interesting to learn that his crucial point is 102°. If the heat in the enormous vats, in which thousands of gallons of vinegar are made daily, reaches that point the process languishes, or stops; and if, as is sometimes purposely done for the destruction of *vibriones* (vinegar eels), the temperature is raised by blowing in steam to a few degrees higher, it is arrested altogether by the simultaneous death of the microbe, and a fresh supply has to be transferred before acetification can be resumed.

The care of the vinegar maker is to preserve the bacterium alive and flourishing so as to destroy, as it were, the alcohol, therefore he keeps his apparatus at an internal heat of from 95° to 100°. We, on the other hand, thirst to destroy the microbe and preserve the patient, and yet we perversely seek to prevent a rise of temperature, which would tend to the injury if not extermination of the former, and could do the latter little or no harm whatever!

In cases of simple continued fever in children and adolescents what is more common than a temperature of 105° for days together? But they never die from it—in fact, they seem to be little inconvenienced by it. On the second day of measles, and especially of *rôtheln*, I have registered it many times, but from one's general experience in such cases have not regarded it with a moment's anxiety. Then, why should we be so anxious to reduce the pyrexia in enteric fever—because it is characteristic of the most serious cases? I submit that this is extremely doubtful; but, if that be granted, it is clear, from comparison with the instances just quoted, that the danger does not lie in the high temperature, for, if it did, the effectual cooling of the blood-stream should avert it altogether—which assuredly is not the case.

For some years past, with no defined theory, only empirical reasoning to guide me, I have been practically working out this idea, sometimes with doubt and hesitation as the index mounted high above "the limit of safety," but with general success. Treating on the expectant plan the disease and its complications, and almost disregarding the temperature; using the thermometer, indeed, rather as a test of progress than an indicator of condition; trusting to the evidence of the pulse and tongue in treatment, and the facial and positional expression in prognosis. As an analyst with a natural fondness for exact investigation, I am accustomed to the use of instruments of precision, but in the presence of conditions of almost infinite variability an instrument which is exact in one direction only is apt to mislead rather than help us—its facile use to make clinical observation half mechanical, and tends to land the busy practitioner in a thermometrical groove as narrow as the instrument itself. In diagnosis—as between roseola and scarlatina—it often leads one astray, and above all gives to mere incalcescence an

importance or even pre-eminence which as a result, or as a symptom, may be of quite secondary position. If in febricula a temperature of 105° is of no moment, why should 104° be regarded as so perilous in typhoid? In the latter case it may be indicative of great peril, but that is another matter, and we have generally other symptoms pointing in the same direction, but a heating which is productive of only passing inconvenience in the one can surely in itself add little to the danger in the other. And the means used to reduce it are usually most distressing to the patient. The cold bath, or pack, with its chill and shock, the fuss, movement, and disturbance of the sufferer, are in themselves mischievous; and if chemical antipyretics be used, we learn from the reports of the clinic of Schulz, of Brunswick, that the nausea, rigors and delirium were so unbearable that the patients greatly preferred the disease to the treatment; and the results certainly justify their choice, with a record of relapses in 40 per cent., and the death of one in four of the cases treated. And he asks "Does not this induce us to believe in the teleological value of fever? Supposing that enteric fever is due to a typhoidal bacillus which an elevated temperature gradually destroys, may we not believe that its reduction really favours the vitality and reproduction of the microbe, and that we are thus arresting the course of a natural remedy, and not only prolonging the disease but inviting a relapse?" And the life history of the *Bacterium aceti* lends the very strongest evidence of the correctness of this surmise. For in the converters we have simply the cell, its food and its results, uncontrolled by the presence of anything which, as in the human body, can modify its growth and action, and the hourly estimation by volumetric testing of the amount of acetic acid formed gives an exact measure of both. Between 90° and 100° it flourishes exceedingly, at 102° it reacts feebly, at 104° it is paralysed, at 120° it is killed. And a reference to Wunderlich (*Medical Thermometry*, New Syd. Soc.) will show what very high temperatures have been safely borne in cases of enteric fever and insolation (107.5°-109.2°) and, therefore, that it is as unreasonable to look upon the ordinary high temperatures of fever as it is to return the perfunctory "senile decay" as a cause of death. In each death follows, but is not due to the condition in question.

I have treated but few cases of enteric fever, and only eleven within the last six years; of these four were serious, and all recovered. One, recently convalescent, was complicated by bi-lateral pneumonia, and the temperature for several days varied between 104.5° and 105.2°, but, carefully watching the case, I saw no reason to depart from the simple expectant treatment which had been successful in the others. The patient took of quinine twelve to twenty-four grains dissolved in dilute hydrochloric acid, every twenty-four hours; digitalis in moderate doses whenever there was heart-failure; ether and ammonia enough to keep the sputum fluid, and from one to three grains of opium at night. The amount of alcohol was regulated by the state of the tongue: if this were moist he had none; if dry, half to one ounce every two hours until that condition passed away. He was sponged all over with hot soap-and-water every day, and more frequently if restless, and kept in a comfortably warm room. Milk thirty to forty ounces in twenty-four hours, exchanged for white of eggs (two to three) beaten up in water when the diarrhoea increased; no beef-tea—for it has no food value, as a stimulant is far inferior to ammonia, and often increases the diarrhoea and sets up tympanitis,—but as much fresh lemonade as he cared for. He was extremely ill, but with youth (twenty-eight years) on his side, and intelligent nursing, got on quite satisfactorily, the pneumonia subsiding on the tenth day and the fever on the twenty-first. In this case, with a persistently high temperature, a dry and harsh skin, I was strongly tempted to administer antipyrin, but I had at the same time a case of simple continued fever in a strumous girl of eighteen years, with almost identical thermometric readings, and I compared the condition of the two day by day. The first was, as I have said, extremely ill, with all the usual symptoms; the other was ill, in bed, and with a skin very hot to the touch, but assuredly in no danger; then why should I regard the mere heat of the body with any anxiety in the one case when it was clearly doing no harm in the other? So the antipyrin remained on the table ready for use, but untouched. Had I then read Dr. Unverricht's paper I should have had a better reason for leaving the pyrexia, as I did, in Nature's own hands.

IV.—NOTES FROM EGYPT.

The first modern Egyptian Medical Society on record.—After a good deal of coaxing on the one hand, and putting to shame on the other, the native Egyptian medical men have at last formed themselves into a Medical Society at Cairo, with Dr. Salem Pasha as president, Dr. Hassan Pasha Mahmoud as vice-president, and Ibrahim Bey Mustafa as secretary. The society was opened on April 2nd with an inaugural address by H. E. Artu Pasha Yakoub, the Sub-Minister of Public Instruction. There was quite a large meeting, as many had

been invited who would not ultimately have any connection with the society. There were present H. E. Abdel Sahman Pasha Rushely (the Minister of Public Instruction), many oulama (the Arabic press), and a sprinkling of European medical men. The meeting was held in one of the rooms at the Ministry of Public Instruction, which had been kindly granted by that Ministry for the use of the society. The proceedings were conducted entirely in the Arabic language.

In his inaugural address the Sub-Minister of Public Instruction dwelt upon the advantages arising out of combined effort in a good cause, and he appealed to the new society to be (constant) intent on their purpose, as constancy led to success. This address was written in such high-flowing Arabic that even the reader had some difficulty in laying proper stress on the parts that needed it. This was to be excused, as the Sub-Minister is an Armenian, and therefore Arabic is not his mother tongue.

Dr. Salem Pasha then rose, and read a long speech, giving some account of the formation of the society and its aims. One of the sentences he pronounced was to this effect: "Brethren, I conjure you to be simple and exact in your reports, and to have nothing in view but research on behalf of the truth and of the public interest." The vice-president, Dr. Hassan Pasha Mahmoud, then opened a discourse on "Diabetes," giving its history from ancient times, and the different theories that had been from time to time entertained respecting it from the time of Avicenna to our day. He gave his own experience in the treatment of diabetes mellitus by salol as very favourable. He referred to four well-marked cases that were completely cured by this remedy—no doubt with the assistance of an appropriate diet, although that was not referred to. Then Dr. Abbate Pasha (Italian) rose and pronounced a short extempore speech in Arabic, congratulating the members of the society on their zeal, and wishing them success. Dr. Grant Bey (a Scotsman) followed Abbate Pasha with a short complimentary speech, and then criticised (speaking all the while in Arabic) the paper that had just been read on diabetes. After referring to the ancient history of the malady as related by Avicenna, he asked Dr. Hassan Pasha Mahmoud if, from a perusal of the original, he could make out whether Avicenna had any suspicion of the cause of the malady located anywhere in the nerve centre. Dr. Grant gave his experience of the treatment of such cases by salol, and salol with opium. He noticed a marked amelioration in some cases, while in others the sugar would disappear entirely from the urine, and not reappear again till some annoyance happened to cause worry, when there was an immediate return of the malady. Dr. Grant Bey wished, therefore, to know exactly if Dr. Hassan Pasha's cases were permanent recoveries or not, or only completely cured for a time.

Dr. Hassan Pasha Mahmoud replied that the four cases he had referred to as being completely cured had never turned up again for treatment, so he considered he was justified in putting them before the society as being permanently cured. Dr. Elui Bey then referred to the statements made by Dr. Grant Bey, making it more clear to the society that Dr. Grant Bey's experience of the use of salol in the treatment of diabetes mellitus was beneficial, but did not produce a radical cure. The President now closed the discussion by stating that there was yet much to say on this subject, but he thought the diet was the main thing to depend upon. On this he closed the meeting, referring the continued discussion of this subject to the next *seance*.

V.—THERAPEUTICS.

Antipyrine and the Antipyretics.—It is a matter of regret that the name *antipyrine* has been given to the remedy introduced by Dr. Knorr, because (1) it is something more than a mere reducer of fever or heat, and (2) we have another agent—*antifebrine*, possessing somewhat similar properties. This system of coining words is not commendable. We may expect to have before long, if it continues, *antithermine*. Some short and more distinctive titles are required for both the remedies. Antipyrine has established its position as a reducer of high temperature, the fall taking place in less than half an hour, and continuing for some hours; and besides this property, it appears to exert a diaphoretic action which materially heightens its action. Special experiences by individual observers in special groups of diseases enable us to appraise its true value. Freidlander has recorded his experiences with antipyrine in scarlatina and acute bronchitis. In every case, after taking the remedy from one to three times in twenty-four hours, in doses of nine grains, the children seemed brighter, ceased grinding their teeth, and gladly took milk, wine, or bouillon. In nearly every case perspiration soon began, was followed by tranquil sleep, and in about two hours the temperature had sunk to 38.5° C. Pulse 120, respiration easy, and not so rapid. These results took place in some cases after a single dose of nine grains, but the effect of the drug

only lasted from eight to ten hours, according to the patient's age, and the dose had to be repeated once during the twenty-four hours. All the children (fourteen) recovered. His experience with the drug in acute bronchitis has been excellent. Before he settled on the use of antipyrine he had lost many children with this disease, and he especially extols it in cases marked by high fever. Antipyrine acts better on well-kept children than on those who are poorly taken care of. It cuts short the duration of the disease. During a severe epidemic of bronchitis which raged in Russia, the mortality was 50 per cent. in those cases observed by Dr. Freidlander and his colleagues. By the use of antipyrine the mortality was reduced to 0 per cent., whilst the mortality of poorly-fed children was estimated at 10 per cent. He gives, when the temperature is over 39.5° C., from nine to fourteen grains in one dose. Nine grains is sufficient for children under two years of age, and the effect will last for about twenty hours. Most of the little patients perspire, then fall again into a gentle and refreshing sleep, from which they awake in one or two hours bright and perfectly happy and contented. Others improve more slowly without either sleeping or perspiring. The cough lessens, breathing becomes easier and less rapid. In three to five days the change for the better becomes very marked. The dose is reduced from four to six grains every day. Freidlander's experiences with the drug in bronchitis have no doubt encouraged other observers to test its action in chest complaints. We may here allude to observations made with the drug in whooping cough. Sonnenberger treated seventy cases, the drug being given in doses from one to three grains three times a day to very young children. He noticed that the paroxysms were diminished when the drug was administered early. In the *Bulletin Général de Thérapeutique*, 15th May, 1888, Dubouquet Laborderie, of Saint Ouen, has an important contribution on the use of the drug in fifteen cases of whooping cough. His conclusions are as follows: 1. Children, with rare exceptions, bear the drug well; it is not dangerous, and it is easy to administer and to watch. 2. The spasm is rapidly calmed, and the period of decline soon reached. 3. It is necessary to see to the purity of the drug, as an impure article gave rise to distressing complications, and was in the market, facts noted by other observers. He gave doses from thirty centigrammes to one gramme for children under two years of age, and of from one to four grammes to children above that age. Dr. Griffith, assistant-physician to the hospital at the University of Pennsylvania, states that he is able to confirm the observations of Sonnenberger on the benefit of antipyrine in whooping cough. In asthma, hay fever, and to reduce the temperature in phthisis, antipyrine will be found highly beneficial.

Antipyrine, as one of the aromatic series, acts as a febrifuge or antipyretic by dilating the cutaneous vessels, and increasing radiation. Its properties in feverish states are thus explainable, but in common with other members of the aromatic series, it has also an action on the blood pressure and elementary nutrition, in consequence of, or concurrent with which, it has an action on the brain and nervous system. Germain Séé has pointed out that local injections, caused diminution of general sensibility in the part injected, and that the reflex excitability of the spinal cord was affected. Robin, Cesari, Arduin, Coppola, and others have confirmed these observations, and in consequence we have antipyrine applied in nervous conditions—to ease pain, as an antispasmodic, and as a hypnotic. We can thus understand its use in migraine, and other forms of neuralgia. Germain Séé was, I believe, the first to introduce it as an analgesic, and he even ventured to predict that it would take the place of morphine. Its use in headache has been confirmed by many writers. In the *Practitioner*, April, page 267, Mr. Bokenham writes of his experience of the drug in sixty-seven cases of headache. He had previously recorded its results in twenty-six cases, and he says, "The good results previously obtained were entirely kept up." He gives small doses, not larger than four grains. He has also used it in chorea with marked results. The hypodermic use of a fifty per cent. solution has been eulogised in France, and here the use of antipyrine in sea-sickness may be mentioned. Ossian Bonnet, in 1887, thought he had discovered the remedy for sea-sickness, but the more recent observations made have unfortunately not confirmed his own experiences. Antipyrine in epilepsy has not achieved the first expectations. Lemoigne limits its use in epilepsy to the following classes of cases:—1. Seizures induced by menstruation. 2. Seizures induced by irritation of intestinal parasites. 3. Cases attended with migraine. As antipyrine has the power of relieving pain, Professor Chouppe administered it to ease the pains of labour; while the uterine contractions went on uninterruptedly the pains were diminished. In rheumatism and gout the value of antipyrine has been demonstrated. Antipyrine has a certain resemblance to salicylic acid, but it has no specific action on the course of acute rheumatism, though it doubtless relieves the fever

and pain. It is too soon to definitely fix the value of antipyrine, though certain conclusions are permissible.

1. In fever Filchne's observations on the antithermic powers of the drug have been confirmed. He gave fifteen grains every half-hour, up to one drachm, when the temperature was high. Pavy, for typhoid, gives as follows: temp. 103, ten grains every half-hour; temp. 104, fifteen and a half grains every half-hour, three doses; temp. 105, sixty-two grains, in four doses, at a half-hour's interval. 2. Its action in migraine appears to rest on sound clinical evidence. 3. Observations and increased clinical experience are required as to its action in many of the other diseases for which it has been vaunted. 4. It is established that antipyrine cannot be used without care, as it has produced symptoms of poisoning. Its administration has been attended by severe gastric pains, urticaria, pleuritis, and unconsciousness. Dr. Oscar Jennings has reported a case where, after a dose of thirty-seven grains (a large dose), on the eighth day the patient had erythematous blotches, conjunctivitis, and temporary prostration.

Dr. Guttman gave fifteen grains to a young girl suffering from cephalalgia; five minutes after she had an acute burning sensation throughout her whole body, with a transient facial urticaria; there was much palpitation and violent general excitement, with blindness of one minute's duration. An hour later the face was very much swollen, and the forearms and hands slightly cedematous. Later, vomiting appeared, with a pulse of 130, and great malaise; the urine was limpid, clear, yellow, with traces of albumen and half per cent. of sugar. It was two days before the swelling and grinds pulse vanished, and on the fourth day she experienced some general weariness. To account for poisoning we have to fall upon (a) idiosyncrasy; (b) too large a dose; (c) impurity of the drug. As antipyrine is a patented medicine, cheap and spurious imitations have been offered, and it is highly desirable in recording any future ill results to specify the preparation used.

Lauder Brunton gives the dose (*Pharmaceutics, Therapeutics, and Materia Medica*, p. 824) as "30 grains hourly for three hours. For children one grain and a half for every year of the child's age may be given hourly for three hours. If it cause vomiting, it may be dissolved in half its weight of hot water and injected subcutaneously." Dr. Brunton thus summarises its action: "It reduces the febrile temperature for some hours when given as above in three doses, and when its effect has passed off, the rise of temperature which then occurs is less frequently accompanied by a rigor than is the case with kairin. It causes profuse perspiration; it slightly increases the blood pressure; it has no action on the respiration; it is excreted in the urine; it sometimes, though rarely, causes vomiting, and very seldom causes collapse." Antipyrine is a synthetically-prepared alkaloid, and its proper name is DIMETHYL-OXY-CHINICINE—a rather difficult name to write and remember, as well as to spell. Antipyrine gives no clue as to the derivation of the drug, and only suggests one of its actions. It would be better to coin from its true, long name, a short word as DIOXYCHIN.

(To be continued.)

The Spirit of the Societies.

CAMBRIDGE MEDICAL SOCIETY, March 2nd. **Charcot's Disease.**—Dr. W. COLLIER showed knee-joint of a woman who had been suffering from Charcot's disease. The woman, aged forty-one, had come under his notice two and a half years previously, with marked locomotor ataxy, with a strong history of syphilis, but none of either gout or rheumatism. Twelve months before death the left limb was noticed to be swollen, but no change could be found in the joint, with the exception of fluid effusion. She had been bed-ridden for sixteen months previously, and the ataxy had been so severe as to prevent her standing without support. Six months later the joint had become totally disorganised, the bones moved freely in every direction; there was very marked grating, but no pain. After death it was found that enormous loss of tissue had occurred, the crucial ligaments had entirely disappeared, the external condyle had gone, and yet a large amount of new bone had been found in the immediate neighbourhood of the destruction.—Drs. EASLEY (Bradbury) and C. W. COLLIER (Oxford) read very interesting papers.

LEEDS WEST RIDING MEDICO-CHIRURGICAL SOCIETY, April 6th. —Several good papers were read at this Society, one by E. ATKINSON, M.R.C.S., the President, on **Supra-pubic Prostatectomy**, and one by Dr. PURDY on **Antiseptic Midwifery**.—Dr. PURDY said that strict

antiseptic precautions were impossible in private practice, and that among the heads of the profession there existed great difference of opinion as to the best antiseptic methods. He had seen much harm done from the routine washing out of the vagina by nurses.—Mr. J. C. WRIGHT pointed out that the adoption of strict antiseptic methods had lowered the mortality in lying-in hospitals from 7 per cent. to less than 1 per cent.—Dr. Hillier and Dr. Braithwaite also made some remarks.

MIDLAND MEDICAL SOCIETY, April 4th.—At the April Meeting of this Society Dr. CURLEY showed a case of **Lupus Vulgaris**, of seven years' duration, on the arm of a girl, aged fourteen years, who was recovering rapidly under the treatment by Unna's plaster.—Dr. BENNETT MAY reported a case of **Pancreatic Cyst**, for which he had operated by removing a large gall-stone from the bladder.—Dr. SUCKLING showed a young woman who had to give up her work (which was making paper bags) on account of paralysis of the upper extremities; she had suffered from colic and constipation. There was a well marked blue line on the gums, and double wrist drop. The intrinsic muscles of the hands, and the extensors of the wrist, did not respond to the faradic current. She was suffering from lead poisoning.—Drs. GORDON LLOYD and D. FOXWELL also read papers.

BRITISH GYNÆCOLOGICAL SOCIETY. **Removal of the Uterine Appendages.**—Dr. GRANVILLE BANTOCK read a paper on removal of the uterine appendages. He also exhibited a number of specimens illustrating the many forms of disease to which the uterine appendages are liable. (1) Cirrhosis of the ovary; (2) Salpingitis in association with an ovarian tumour. (3) An example of abscess of the right ovary. (4) A recent specimen from a single woman, aged twenty-four, illustrating the conditions of hæmatosal pinx in the uterine end of the left tube, and pyosalpinx in the outer portion in which the contents had undergone caseous degeneration. The patient was progressing well.—Dr. Fancourt Baines, Dr. Robert Bell (Glasgow), and Mr. Lawson Tait also read papers.

PATHOLOGICAL SOCIETY OF LONDON, May 1st.—Mr. ALBAN DORAN exhibited a **Right Fallopian Tube and Ovary**. The tube was dropsical, and its walls were invaded by a cancerous growth. On March 1st, 1888, Mr. Knowsley Thornton removed the tube and ovary. The patient recovered. The uterus was free from malignant disease. The history of the case, and the small size of the infected ovary, compared with the large proportions of the growth in the tube, would appear to prove that the tube was the primary seat of cancer. A cancerous ovary grew very rapidly, and seldom infected the tube till it had become a large tumour. In the specimen exhibited by Mr. Doran, malignant degeneration of previously innocent papillomatous growths might have taken place; but in any case he believed that the cancer was histologically of glandular origin.—Dr. QUARRY SILCOCK showed a specimen of **Cystic Disease of the Testis**, Dr. MONTAGUE MURRAY two cases of **Congenital Cardiac Malformation in Adult Women**, and Dr. JOSEPH COATS showed a specimen of **Multiple Cancer of the Lungs, Bones, Brain, etc.**—Dr. CROOKE, Birmingham, exhibited specimens from a case of **Primary Growth of the Liver**. The patient was a painter, aged sixty-five, who had been under the care of Sir Walter Foster and Dr. Simon.

ROYAL ACADEMY OF MEDICINE IN IRELAND (SECTION OF STATE MEDICINE), Friday, April 6th.—Dr. GRIMSHAW, Registrar-General for Ireland, in conjunction with Sir CHARLES CAMERON, Medical Officer of Public Health for the City of Dublin, brought before the section a paper **On the Distribution of Enteric Fever in the City of Dublin**. The authors state that their attention had been especially directed to the subject in connection with an inquiry which they had recently conducted into the prevalence of enteric fever in the Royal Barracks, and part of the information utilised for their paper had been compiled with a view of throwing light on the barracks inquiry. They showed that while typhus fever had been steadily diminishing in Dublin for many years, and relapsing fever almost entirely absent, enteric fever had remained stationary as to prevalence, not showing any marked tendency to increase or diminish. The report was a very valuable one, and a discussion took place in which the President (Dr. C. F. Moore), Drs. Little and Moore, took part.—Dr. G. M. FOY read a paper **On Hypnotism**, in which he traced the history of hypnotism from the days of the notorious Irishman, Valentine Greatrux, who was specially commissioned by Charles II. as a stroker, and gave an account of the wonderful boy "Foreteller," Duncan Campbell, the Scotch lad, who had De Foe for a biographer, and was the subject of some of Dick Steele's

papers in the *Spectator*, up to the advent of Mesmer. He came to the conclusion that on the whole hypnotism could not, in our present insufficiency of knowledge of psychology, look for support from scientific medicine.—Dr. EDGAR FLINN gave a paper in which he pointed out some of the reasons for supporting **Glenгарriff as a Health Resort**. A good discussion on the paper ensued.

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NORTH OF IRELAND BRANCH, April 19th.—Dr. WHITTLE showed a case of **Abdominal Aneurism**.—Dr. JOHN STRAHAN read a paper **On Turpentine in Whooping-cough**. He drew particular attention to the value of this drug, and regarded it as one of the best stimulants in cases of whooping-cough.

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OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM, May 3rd. **Melanotic Sarcoma**.—At a meeting of this Society Mr. J. W. HULKE, F.R.S., President, in the chair, Mr. C. HIGGINS gave an account of a case of melanotic sarcoma. The chief point of interest was that the appearance of the growth simulated to such an extent an opaque and displaced lens as to be taken for one by more than one who had examined it. The eyeball was eventually excised, and found to contain a mass of melanotic sarcoma. The patient died with a greatly enlarged liver seven months after the removal of the eyeball. Mr. MACHARDY pointed out how a similar appearance could be avoided by those who had to wear an artificial eye, by wearing spectacles or eyeglasses lined with old lenses so that the lens in front of the artificial eye had something like three degrees greater refracting power than that before the natural eye. The extra lens power before the artificial eye produced an optical delusion regarding the level and size of the latter, and the excess of lens power, which was usually about three degrees, could be varied according to the distance at which the lens placed was in front of the artificial eye.—Mr. LATHAM THOMPSON read a paper on the removal of staphyloma of the cornea. He recommended that a curved needle, threaded with horsehair, should be passed through that portion of the staphyloma which it was intended to remove; it afforded a ready means of steadying the eye whilst the elliptical incisions were being made, and of removing the portion after they were completed. The edges of the wound usually adapted themselves readily; the parts were then flushed with a weak solution of perchloride of mercury, and pressure applied to keep them in position. The results were satisfactory.—Several specimens were shown by Dr. W. J. C. COLLINS.—Photographs and drawings of some rare affections of the eyelids.—Mr. H. A. STEPHENSON, case of double optic neuritis after measles.—Mr. JESSOP, new form of pteroscope.

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BRIGHTON AND SUSSEX MEDICO-CHIRURGICAL SOCIETY, May 3rd.—At a meeting of this Society F. W. SALZMANN, President, in the chair, Sir SPENCER WELLS read a paper on **Electrical Treatment of Diseases of the Uterus**, in which he said that he had had, perhaps, a longer and more varied experience than most men in dealing with uterine diseases, especially those which were characterised by over-growth. He had constantly had to regret the inefficacy of medical treatment; and the result of surgical operations, though sometimes brilliant, had so often come so short of his desires that he had for many years past fallen into a frame of mind readily disposed to listen to any suggestion of a mode of treatment which offered a reasonable chance of success, and avoided the risks and perils attending the bolder practice, so that when reports had reached him of what Dr. Apostoli had been teaching and doing in Paris, they came with a welcome ring. Electro-therapeutics were no novelty to him. More than thirty years ago he had put galvanism to the test, and had gathered in various ways evidence of its potency, both in destroying and repairing tissues. What he had learnt of the treatment of ulcers by galvanism had been published in 1849, by Golding, Bird, and his son, and Mr. Nunn, as far as he knew, were the only ones who made use of the practice. He had tried the galvanic stem pessaries of Simpson's in amenorrhoea, and used them still with good results. He (Sir Spencer Wells) told of a case where, quite recently with Dr. Goddard, of Highbury, he had removed a cervix-uteri without the loss of blood. Hearing, then, of Apostoli's success in Paris, he went to Paris, where he was received frankly and cordially by Apostoli. Dr. Apostoli explained his views to him, and demonstrated his mode of procedure. He threw open the records of his daily practice and gave him the opportunity of verifying his diagnosis, and witnessing his treatment of the cases actually under his care. Besides this, he mustered for his inspection about sixty of the patients who had passed through his hands. We shall hope to give a fuller account of Sir Spencer Wells' paper, upon which Dr. Apostoli said he had but one word to add to what had been said by Sir Spencer Wells, and that was that in the month of August, 1885, he (the speaker) wrote as follows: "If the electrical treatment of

fibroid tumours of the uterus is not destined to altogether replace the knife, yet it ought, when its safety and efficacy are taken into consideration, to be counted a most useful auxiliary to surgery; whether it is to be used only for women upon whom it is not advisable to operate, or whether it will delay, for all, for a time, at least, or perhaps render unnecessary an operation which is dangerous." These words remained true to-day. After an experience of nearly six years, during which time more than 500 patients had been treated, and more than 6000 applications of electricity had been made, he was able to confirm what he wrote three years ago, and to say that his method was not in itself dangerous. It was also, however, necessary to state that it might become full of danger in inexperienced hands, and, if antiseptic precautions were not carried out, or if the rules which he had laid down were not attended to. These rules were as follows: 1. Never to employ large doses suddenly, but always gradually, and according to the amount of tolerance which was shown by the uterus. 2. In all suspected and recognised inflammations of the uterine appendages it was necessary to redouble the precautions and to lessen the doses. He repeated that his method was almost constantly efficacious in relieving symptoms. The electrical treatment did not pretend to make a radical cure of fibroid tumours of the uterus; it was content to diminish their bulk, to relieve the patients, and to make them feel well. In the presence of an operation such as that of hysterectomy, always difficult, and accompanied with great danger; and that of oöphorectomy, an operation not always possible, nor always efficacious; the electrical treatment, in its simplicity, in its freedom from danger, aspired legitimately to place itself before all gynaecologists as a means of treatment of fibroid tumours of the uterus, palliative in the first place, but also one which allowed us to assure our patients that they would almost certainly remain in good health.

Dr. PLAYFAIR said that few subjects in gynaecology had of late years caused more interest than Dr. Apostoli's work, and he was glad to find it made the subject of public discussion, so that the experience of those who had been working at it should be learned. He (Dr. Playfair) had also visited Dr. Apostoli, at Paris, and had free access to his reported cases. Of one thing he was perfectly certain: that if Dr. Apostoli was an enthusiast, and possibly given to over-estimating the value of his treatment, he was at least an honest and convinced enthusiast. He (Dr. Playfair) had, since October, been endeavouring, by numerous trials, to form an estimate of its value. In so short a time no very positive conclusion could be arrived at, especially as to permanency of results, but he had at least a fair opportunity of testing it. He found it the most useful in cases of dysmenorrhoea and bad chronic endometritis, with profuse glairy discharges, as some cases of both kinds, which had received years of treatment, were apparently cured after three or four applications of the electro-negative currents. He had only seen two cases where the slightest mischief had followed its use—one a case of pelvic peritonitis with pelvic exudation, in which he was conscious that he had used it too soon; the other a case of fibromyoma, which he had watched for ten years steadily growing—it nearly filled the pelvic cavity, and reached above the umbilicus. He had made six electro-negative punctures in Douglas's pouch. These were followed by pyrexia, accompanied by a profuse purulent offensive discharge from the uterine cavity for two or three days. The tumour had entirely disappeared, but the constitutional disturbance had been considerable. He (Dr. Playfair) strongly protested against the statement put forth by some that this class of work should be carried out by a professed electrician. Anything more absurd he had never heard of. Any intelligent student could learn it, as far as the electricity is concerned, in half an hour; but the selection of cases, the passing of the sound, etc., required a profound gynaecological knowledge. Drs. Aveling, Inglis, Parsons, Keith, Heywood-Smith, Elder (Nottingham), also took part in the discussion.

MESSRS. MAYER and MELTZER exhibited a battery for the electrical treatment of fibroids and other uterine diseases. The battery, which is 14 in. x 10 in., is so arranged that the fluid cannot be spilt if carried with ordinary care.

* * * * *
CLINICAL SOCIETY OF LONDON, April 13th—**Acute Periosteal Swellings in Infancy**. By R. J. Godlee (*Lancet*, April 21st, 1888).—A lady, aged forty-one, had applied to him on account of a great enlargement of the thyroid body of about nine years' duration, in which a cyst formed which caused neuralgia by pressure on branches of the cervical plexus; this cyst Mr. Godlee opened and drained, with relief of the symptoms. The patient, who had previously been of a slight figure and possessor of a good voice, first noticed the disappearance of her high notes, then the swelling of the neck, and then the sudden stopping of the menses at the age of thirty-six. Since that time there had occurred a gradual increase of the thyroid, accompanied by enlargement of the bones of the face and

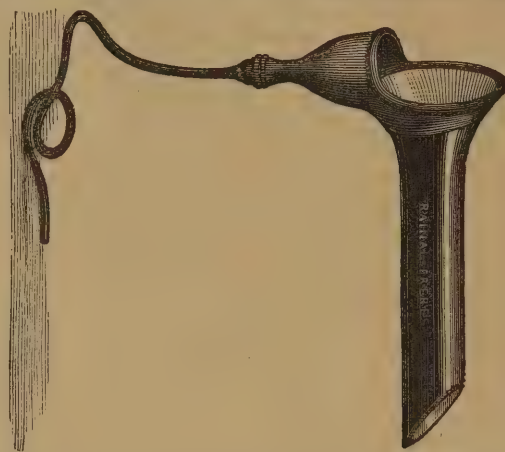
limbs, and especially of the lower jaw and of the hands and feet. The patient came of a gouty and rheumatic family, and had been the subject of rheumatism before the illness developed itself, but not afterwards. The present state was then described. Bones; lower jaw much enlarged, so that the teeth, which spread out, could not adapt themselves to those of the upper jaw; head lines little if not at all affected, so that the face had the shape of an egg with the large end downwards, thus differing much from that of osteitis deformans; clavicles and ends of ribs massive, so that the sternum seemed sunk in a hollow; bones of limbs not generally thickened, but all the natural prominences much exaggerated, and the small bones of hands and feet much enlarged, so that the extremities had become broad and spade-like. Spine: Marked kyphosis suggesting caries, and causing considerable diminution of height. Cartilages of ears, and probably of nose and larynx, thick and stiff. Skin coarse, and with large sebaceous glands in face; natural elsewhere. Subcutaneous cellular tissue normal, but deficient in amount, owing to emaciation. Perspiration profuse, the skin having been previously not abnormally moist. Muscles much wasted. Senses: Hearing normal; smelling much impaired, especially for delicate flavours, the tongue being very thick and large; vision good; touch normal, the patient being still able to play the organ as well as ever. Voice harsh, metallic, and monotonous. Respiration: Some dyspnoea, partly due no doubt to the thyroid enlargement. General condition one of marked and increasing weakness; she "shuffles about like an old woman." Appetite poor, but thirst excessive. Pulse rapid. Temperature normal. Urine contains no albumen or sugar. Intelligence perfect, and disposition placid. Mr. Godlee then referred to (1) the connection between this remarkable condition of the bones and the abnormal state of the thyroid noted in most cases, comparing it with cases of serious malignant tumours of the thyroid, which have a tendency to recur in bones; (2) the relation between the abnormal state of the thyroid and the early stoppage of the catamenia, also apparently a common symptom of the disease; (3) on the resemblances and differences between acromegaly and osteitis deformans; (4) on the superficial resemblance but wide difference between acromegaly and myxoedema.—Dr. Hadden and Mr. Ballance also brought forward a case of acromegaly.—Dr. Wilks also read notes of a case of the disease in a young woman aged twenty-eight. He saw her in February, 1869. She had been good-looking, but had become so hideous that the boys shouted after her in the streets. Her features became thickened and deformed, and the hands and feet large and ungainly. The malady had been coming on for six years, during which time there was amenorrhoea. She had lost the sight in both eyes. She was given arseniate of soda, which seemed to do good. In April, 1870, she went into the country, and was subsequently reported to have died comatose. His belief at the time was that she had a tumour of the brain, his diagnosis being based upon the persistent headache and optic neuritis. He was of opinion that the disease was quite distinct from any other, and the cases belonged to a class quite outside the ordinary pathology. They could understand the mechanism of lung disease or heart disease, but this disease was a form of perverted nutrition. Alluding to some remarks by Dr. Hilton Fagge as to the compensation which existed between the different functions and organs, he pointed out that now and again cases were observed in which particular tissues tended to grow beyond their proportion—bone, fat, or glands. Sometimes the extremities began to sprout, for some reason best known to themselves. These were physiological conditions of nutrition, the why and the wherefore of which they were unable to explain. In a paper he had lately read in a German journal on the subject, he had been struck by the similarity of the symptoms in his own case. He mentioned that Charcot had given it a name indicative of his belief in its nervous origin. Some years since, when the pathology of Addison's disease was being investigated, Sir William Gull was working at the brain, and remarked on the wonderful resemblance which existed between the structure of the suprarenal capsule and that of the pineal gland. He suggested at the time that it would be curious to notice whether the pineal gland was also affected in Addison's disease, but the result of the inquiry was negative.—Mr. Godlee, in reply, said that in three cases of acromegaly there was found, *post-mortem*, some enlargement of the pituitary body. In one case it was as large as a walnut. Erb's paper collected eleven cases of the disease, which, with the two now reported, brought the number up to thirteen. They had occurred between the ages of fifteen and fifty. The cases recorded by him were very interesting. The first case was in a woman of fifty-eight. The disease came on at the menopause. This patient suffered from migraine, a not uncommon symptom in this disease. In her case the disease progressed for three years, and then remained stationary for six. The loss of vision in several cases seemed to have been due to opacity of the cornea. Friedreich had described two cases. With regard to the temperature, it was normal in his own case, except just subsequently to the removal of the thyroid body. The long bones

were distinctly affected. In several cases the marked enlargement of the lower jaw was absent. In connection with the nails, Erb had pointed out that in his cases they were much affected, as in other recorded cases.—Dr. Hadden, in reply, mentioned that Dr. Ord had examined his patient, and had said distinctly that it was not a case of myxoedema, the disease with which it was most likely to be confounded.

Surgical Aids and Appliances.

DR. POZZI'S SPECULUM OVERFLOW TUBE.

IN many operations on the uterus where the speculum is used, and injections given through it, as after cauterisation, the returning fluid



wets the patient, causing unpleasantness, etc. Dr. Pozzi, the well-known Secretary of the French Surgical Congresses, and a specialist in gynaecology, has devised a simple means of remedying this defect. His little apparatus may be fixed on any ordinary speculum. Its action is fully explained by the accompanying illustration.

Medical Miscellanea.

THE subject of our next illustration will be Sir Robert Saundby, M.D.

Professr Verneuil, Paris, was entertained at a banquet by his pupils, and presented with his bust in marble.

The Medical Sick and Benefit Society continues to exhibit signs of development. It has passed out of babyhood.

The death is announced of Dr. Vander Laan (Lisbon), the leading ophthalmologist in Portugal.

A memorial window has just been completed for the chapel of the Bristol Royal Infirmary, to put on permanent record the heroism of a young surgeon in that institution, Mr. William Connor Lysaght, who sacrificed his life in an attempt to give relief in a case of diphtheria. The patient had submitted to the operation of tracheotomy, and after the tube had been fixed the throat became so clogged that, despite all efforts of the faculty, it could not be cleared to admit of respiration. Young Lysaght, forgetful of himself, at once placed his lips to the tube, removed the obstruction, and gave the sufferer relief, though only for a time. Lysaght soon found that by his hazardous deed he had infected his own throat, and to the intense grief of his friends, his noble act caused his death. The memorial, which has been subscribed for by his friends and brother officers, is a triple window, with illustrations of Christ healing the sick as the principal subject, and in three lower panels are portrayed the charitable deed of the Good Samaritan, and Peter and John healing the sick. In the tracery work are the emblems—Faith, Hope, and Charity; and at the base the inscription, "To the glory of God, and in affectionate remembrance of Wm. Connor Lysaght. Born May 8, 1861. Died July 24, 1887."

We regret to have to announce the death of Dr. J. C. Waddell, Moncton, Longton, Staffordshire, an esteemed contributor to the *Provincial Medical Journal*. His articles were unsigned, and chiefly dealt with the social or medico-political aspects of the profession. His views were progressive.

We have received the first numbers of the *Revue Medico Pharmaceutique*, published at Constantinople, and we congratulate the editors upon the excellence of their journal. In the fourth number there is an article on "Vaccination at Constantinople," from which it appears that animal vaccination is the form adopted, and that under the Sultan's sanction the Bureau of Vaccination is maintained in a state of efficiency.

The use of saccharine in diabetes was objected to in a discussion at the Société de Médecine Pratique, Paris, March 29th, by M. Gautrelet, and other members, on the ground that excessive excretion of alkaline chlorides is occasioned thereby, and that it retards the processes of digestion. M. Bardet stated that in the latter respect he had himself observed unfavourable results from the employment of saccharine either as a medicine or condiment.

DAHL'S DYSPEPSIA CAKES.—An old parish priest in Ireland once gave a medical friend of ours the following receipt for making dietetic bread:—Pour boiling water on entire wheat meal, mix it into dough, and bake it in the oven. This is a most effective laxative, but it is not very palatable, and one needs to eat no other kind of bread. A Swede residing in America has hit upon a plan of making cakes out of the cortical portions of several kinds of grains, thus providing in small compass those parts of the grain which are removed in the ordinary process of preparing flour. Each cake weighs about an ounce and a quarter. Half a cake to a whole cake is soaked in water, milk, beef tea, soup, or other hot fluid, and taken along with each meal. The natural action of the bowels is soon restored, and the dose can be reduced to a cake or half a cake *per diem*. We have tried it personally, and have found it a most effective remedy, and the testimony of others is the same. It is, of course, a great advantage to have such a convenient dietetic remedy for constipation, which, at the same time, does not interfere with the use of ordinary bread.

Correspondence, Notes, and Queries.

Communications, Books, etc., should be addressed directly to the EDITOR, "The Provincial Medical Journal," Horton House, Halifax.

Matters of business should be addressed to the Publisher, at the Offices, 10, Friar Lane, Leicester; or to the London Representative, Mr. E. BELLA, 58, Charing Cross Road, W.C., to whom all communications respecting Advertisements should be addressed.

We cannot undertake to return rejected MSS. unless stamps sufficient for their postage are enclosed.

We shall be glad to receive reports of Medical Vacancies, Appointments, Meetings of Societies, etc.

Papers containing passages for consideration should be marked.

Correspondents must please attest their communications with their proper name and address (not necessarily for publication).

Contributions must be written on one side only of the paper.

MSS. intended for publication to be sent in not later than the 16th of the month.

The insertion of any letter in these columns cannot be taken as necessarily indicating our adhesion to the views or statements therein expressed. The same remark applies to articles to which a name or nom-de-plume is attached.

METROPOLITAN PROVIDENT DISPENSARIES.

To the Editor of "The Provincial Medical Journal."

SIR,—Dr. Rentoul, in his reply to my letter, travels over a wide field. He says: "It would appear that Dr. Paramore neither believes in sick clubs nor in provident dispensaries." As regards sick clubs, I thought Dr. Rentoul did not admire them, as he said in his first letter: "It is well known that a club doctor's life is a broken-hearted life, full of worries and insults." In a recent correspondence, headed "What are things coming to?" Dr. Belcher writes in the *Gloucester Journal*: "The most impressive language is sometimes used to express the loathing and detestation that some medical men feel towards clubs, even by those having clubs, as well as others who have not." Again he says: "The chief cause of this widespread feeling of aversion arises

from the fact that medical men feel they are scandalously remunerated, and are too often taken undue advantage of." Again he says: "The more devoted a man is to his profession, the more he dislikes club practice; and the more independent a man is of his profession, the less he entertains the thought of a club at any price." Dr. Rentoul omitted in his quotation from my letter that I said: "Contract work is notoriously bad, especially when the greatest amount has to be done for the least remuneration. Club practice is degrading, and is a loophole for dishonesty, and it is rare for a club patient to have the same amount of attention and quality of medicine as a private patient obtains, and yet this dispensary scheme is merely an amplitude of the club system, with this important difference—that in clubs and friendly societies none but candidates of a certain age and in good health are admitted."

Dr. Belcher also writes: "Throughout every part of England club patients are looked upon and spoken of by medical men as belonging to a different class to their ordinary private patients. They are generally regarded as a sort of alien race, of little or no good to anybody as a rule, it being their chief maxim to pay as little as possible for medical attendance, and to invariably expect a great deal of attention in return." It would appear from these assertions that to extend the club system of a penny per week, as has been contemplated by the Metropolitan Provident Medical Association, would be a professional disaster and a public calamity.

In answering my challenge to show any difference between the club system and provident dispensaries, Dr. Rentoul not only corroborates my statement, but shows the infinitely superior value of clubs to a medical man, in a financial point of view, by saying clubs exclude the two extremes of life, and those of certain callings, make candidates pass a medical examination, and have stringent rules against members who contract illness through venereal disease and drink. No such safeguards are in existence with the club, or so-called dispensary or assurance system, of the Metropolitan Provident Medical Association. Dr. Rentoul exultingly exclaims: "Are these sufficient differences?" "If not," says he, as an encouragement for medical men to join the provident dispensary movement, "there are more." Quoting his own words: "Is it not well known that few club patients trouble the club doctor, generally going to the hospital or 'prescribing' chemist?" This does not accord with my experience, nor do I think it a sufficient reason for "the club doctor's life to be a broken-hearted life," as is contended by Dr. Rentoul. Surely medical men would not exchange more work and less pay than what ordinary clubs entail by joining the Metropolitan Provident Medical Association. I beg pardon, sir. I ought to have said Medical Assurance Society. What a name, or rather pseudonym! The Association has not been able to thrive on its original name, but has had to undergo a re-naming, as well as a re-modelling! The *Provincial Medical Journal* has well called it "The London Medical Pauperisation Scheme." In what way is it a Medical Assurance Society, any more than any contemptible and degrading club? Dr. Rentoul asks what is to be done with the wage-earning class who are unable to pay ordinary medical fees, and wonders how it is that some system for supplying medical aid to those of slender means was not long ago settled. As far as my knowledge goes, no one needs to be ill, and be unattended during the time of suffering and sickness. In London we have our many medical charities, and there is the parochial relief. Our parish doctors, through the infamous contract system, were underpaid at one time, but now are said to be paid for work they never do. We all regret the existence of poverty. The fact of people being too poor to pay adequate remuneration to medical men is not an excuse to demand as a matter of right unlimited services for a limited sum of money—say, at the most, two or three shillings a year. Is it right, because a person cannot afford a decent fee, nor even two or three shillings for a single consultation or visit, therefore he or she should have the power to demand professional (!) attendance for a whole year for that amount, and then call it medical assurance? Let us be just, and fear not, and call it by the right name: "Medical Fraud." If people are so poor as to be unable to pay only that amount per annum, it is a crying shame to take such a paltry sum from them at all. I agree with Dr. Rentoul, that at present we are the laughing-stock of the community, especially when we allow ourselves to be robbed by Friendly Associations, and the Metropolitan Provident Medical Assurance Society, falsely so called.

Dr. Rentoul takes exception to my views of contract work. I have no personal objection to a good salary being given to a medical man, especially if it mean something more than money—viz., prestige and good feeling, with satisfaction to all concerned. I have, however, a great antipathy to any scheme which means overwork, practically no pay, harass and worry, to a medical man, and then leave his widow and children penniless! Dr. Rentoul may possess a little more knowledge than I do of what is usually meant by "contract work." I speak feelingly on this subject, as several of my patients have been ruined by

it. Many of the magnificent structures in London have been built by men who have sacrificed all they had under the contract system. Dr. Rentoul may study the beauties of what I mean by contract work in the East of London, with its necessary attendant, the "Sweating System." We can observe the workings of the contract plan in the boasted progress of the noble institutions of Friendly Associations, where in one instance one medical officer, with an assistant, attends (!) to the medical and surgical needs of ten thousand persons. This may be very gratifying to those gentlemen who look upon death as not the worst thing that can happen to a human being! "It is an ill wind which blows no one good." Doubtless the undertakers and the future cremators will be the only gainers by the transactions of these grand schemes. In Geneva I am informed that an endeavour has been put forth to make it penal for a medical man to refuse to go to any person who may demand his services. When a medical man enters into a contract to attend a person for a few paltry pence, he is bound legally and morally to do what he has promised. Medical men, by entering into such slavery, must not marvel if crossing-sweepers and costermongers tell them to take a back seat in the ranks of respectability. The independence and dignity of the profession will be a thing of the past when such an infamous system is unfortunately in existence. Why should medical men sell their birthright of freedom and choice for less than a mess of pottage?

Is it logical to say it is the numbers which pay when there must be inevitable loss on each individual who joins the dispensary, providing the contract is faithfully carried out? The numbers may pay in some clubs, where the doctor is practically never consulted. If a lot of strong and healthy young men, living in the country, join a club, and pay four shillings a year, and never make use of the doctor, of course it does pay the doctor up to a certain time, but not when age and infirmity come on. The only way to keep a club going is to have constant recruits from the young and healthy, otherwise the club soon comes to grief. The club welcomes only the strong, healthy, and young. The provident dispensary opens its arms to the babe and to the aged, and all who choose to come, whether following unhealthy occupations or immoral lives, provided they sign a paper to say their earnings are not more than a certain amount.

Dr. Rentoul says I am ominously silent regarding the great abuse of our medical charities, because I believe in their necessity and value to the community at large. I look, however, upon provident dispensaries as a mockery and a disgrace. I admit the hospital out-patient department might be improved, but the condition of provident dispensaries is irremediable, and the sooner an Act of Parliament is passed to extinguish such impositions, the better both for the profession and the public.—I am, Sir, your obedient servant,

2, Gordon Square, W.C.

RICHARD PARAMORE, M.D.

TURKISH BATH IN A PRIVATE HOUSE.

To the Editor of "The Provincial Medical Journal."

SIR,—Fowler and Wells, of New York City, publish works on "Hydrophobia," and also a small pamphlet on "The Construction of Turkish and other Baths." John Heywood, Publisher, Manchester, sells the works in question, and by sending a penny stamp a list of the same might be procured from: L. N. Fowler, Fleet-street, Ludgate Circus, London; possibly he is there to the present time.—Yours truly,

Macclesfield, April 29th, 1888.

G. N., M.D.

CALOMEL AS A MEANS OF PREVENTION OF PITTING IN SMALL-POX?

To the Editor of "The Provincial Medical Journal."

SIR,—Calomel has recently been mentioned as a prevention of pitting in small-pox, having, it is stated, been found of great service during an epidemic in Varsovia (see *L'Union Medicale*, April 10th, 1888). The question is asked, "How does the calomel act? is it as calomel, sublimate, or as metallic mercury? Or is it due to the action of a microbe, seeing that calomel is supposed readily to undergo decomposition?" I would presume to answer the question by another—How many of the individuals, in whose cases the external use of calomel was found to be so useful, had been vaccinated or re-vaccinated? Vaccination, I submit, is the only reliable means of protection against pitting from small-pox, and even that does not always prevent it. Inasmuch, however, as it disarms the disease of its severity, it decreases the disfigurement of the features. In years gone by I have tried the various means recommended for this purpose, and have always found them fail, *except where vaccination had been performed*.—I remain, yours faithfully,

Theobalds, Waltham Cross,
May 2nd, 1888.

W. B. KESTIVEN, M.D.

Bibliographical Record.

BOOKS, PAMPHLETS, ETC., RECEIVED.

- A Manual of the operations of Surgery for the use of Senior Students and Junior Practitioners. By Joseph Bell, M.D., F.R.C.S. Edin. Sixth edition. Edinburgh: Oliver & Boyd. London: Simpkin, Marshall & Co.
- Dissolution and Evolution, and the Science of Medicine. By C. Pitfield Mitchell, M.R.C.S. London: Longmans, Green & Co.
- Nature's Hygiene: a Systematic Manual of Natural Hygiene. By C. T. Kingzett, F.T.C., F.C.S. London: Baillière, Tindall & Cox.
- Diseases of the Skin. By J. V. Shoemaker, M.D. New York: D. Appleton & Co.
- Physiological and Clinical Studies. By Alexander James, M.D., F.R.C.P.E. Edinburgh: Oliver & Boyd, Tweeddale Court. London: Simpkin, Marshall and Co.
- Thirteenth Annual Report of the Public Health of Cleator Moor. By John Eaton, M.D.
- Curvatures of the Spine. By Noble Smith, F.R.C.S. Ed., L.R.C.P. Lond. Second edition much enlarged, with illustrations. London: Smith, Elder & Co., 15, Waterloo Place.
- Physiological and Clinical Sketches. By Alexander James, M.D. Edinburgh: Oliver & Boyd. London: Simpkin, Marshall & Co.

PERIODICALS RECEIVED.

AMERICAN:—

1. The Journal of the American Medical Association.
2. The Therapeutic Gazette.
3. Medical Register (Philadelphia).
4. New York Medical Journal.
5. Medical Record (New York).
6. The Medical Bulletin (Philadelphia).
7. New England Medical Monthly.
8. Medical Times (Philadelphia).
9. The Polyclinic (Philadelphia).
10. The Analectic.
11. The Medical Standard (Chicago).
12. The St. Louis Medical and Surgical Journal.
13. The Denver Medical Journal.
14. Annals of Gynecology (Boston).
15. The Medical News.
16. The American Lancet.
17. The Medical and Surgical Reporter.
18. The American Druggist.
19. The Western Medical and Surgical Reporter.
20. The South Western Medical Gazette (Louisville).

BRITISH:—

21. The Philanthropist.
22. The Practitioner.
23. The Medical Chronicle.
24. The Medical Press and Circular.
25. The Journal of Microscopy and Natural Science.
26. The Indian Medical Gazette.
27. The Australasian Medical Gazette.
28. The Hospital Gazette.
29. The Journal of Rhinology.
30. The Birmingham Medical Review.
31. The Ophthalmic Review.
32. The Pharmaceutical Journal.
33. Public Opinion.
34. Health.
35. The Chemist and Druggist.
36. The British and Colonial Druggist.
37. The Australasian Journal of Pharmacy.
38. The Nursing Record.
39. Diet and Hygiene.

FRENCH:—

40. Journal de Medecine de Paris.
41. L'Union Medicale.
42. Le Progrès Medical.
43. Bulletin Général de Thérapeutique.
44. Gazette de Gynecologie.
45. Gazette Hebdomadaire des Sciences Medicales.
46. Journal de L'Ouest.
47. Journal du Nord.
48. L'Electrothérapie, Journal d'electricité.
49. Revue Pratique d'Obstetrique et d'Hygiene de l'Enfance.
50. Annales de Gynécologie et d'Obstetrique.

GERMAN:—

51. Centralblatt für Kinderheilkunde.
52. Centralblatt für Gynecologie.
53. Centralblatt für Chirurgie.
54. Illustrierte Monatschrift der Artzlichen Polytechnik.
55. Der Fortschritt.
56. Fortschritt der Medecin.

ITALIAN:—

57. Lo Sperimentale.
58. Rivista Italiana.
59. Rivista Internazionali di Medicina.

PORTUGUESE:—

60. A Medicina Contemporanea.

RUSSIAN:—

61. Vrach.

SPANISH:—

62. Rivista Clinica de Barcelona.

The above journals have been regularly received. We shall feel obliged if editors of British and foreign journals will notify whether their journals have been sent.

Copies of Index for 1887 may be obtained at office, 10, Friar Lane, Leicester.

We regret, owing to pressure on our space, that we are obliged to hold over several letters, communications, etc.

THE Provincial Medical Journal:

A MONTHLY REVIEW OF MEDICAL SCIENCE, LITERATURE, AND BIOGRAPHY.

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Our Portrait Gallery.

ROBERT SAUNDBY, M.D. EDIN., F.R.C.P. LOND.

THE descendant of an ancient family, settled for many centuries at Saundby, in Nottinghamshire, Robert Saundby was born in London in 1849. After leaving school he accompanied General Hamilton Vetch to India in 1865, in order to engage in tea-planting, an enterprise in which both had family interests. Several disastrous years followed, and, after the total failure of the concern with which he was connected, the subject of our sketch returned to this country in 1870 with the intention of devoting himself to the study of medicine, and of entering the Indian Medical Service.

We have reason to believe that he has always regarded it as a piece of good fortune that he was led to study medicine in Edinburgh, where he soon began to make his mark. After passing through the scientific training of the first two years of student life, he threw himself with ardour into the study of pathology and clinical medicine. Although powerfully attracted by the teaching of Lister, whose experiments and investigations were then in progress, he was led by his natural bent to devote himself more and more to the problems connected with internal medicine. During these student days he enjoyed the friendship of Professors Masson, Blackie, and Hughes Bennett, as well as of Drs. Balfour, Grainger Stewart, Duncan, Wyllie, and Pettigrew. Early in the summer of 1874 Dr. Saundby took the Licence of the Edinburgh College of Physicians, in order to qualify himself for the post of Resident Physician to Dr. Balfour. In July he became a Member of the Royal College of Surgeons; and in August he took his M.B. degree in Edinburgh. In the autumn of the same year he was offered, and accepted, the post of Resident Medical Officer at Saughton Hall Institution for the Insane, where he was associated with Dr. Batty Tuke. While acting in this office he was elected Senior President of the Royal Medical Society, an honour universally regarded as the "blue ribbon" of the Edinburgh School. During the following year Dr.

Saundby wrote annotations for the *Edinburgh Medical Journal*, and the *Journal of Mental Science*; papers on "Suppurative Pericarditis" and "Oxaluria" for the former journal, and, along with Dr. Batty Tuke, the article on the morbid histology of the insane brain for Quain's *Dictionary of Medicine*.

On account of personal and family reasons he renounced his original intention of entering the Indian Medical Service, and decided to devote himself to the practice of medicine as a physician. Leaving Saughton Hall, he accepted the post of House Physician to the Royal Hospital for Diseases of the Chest, in London. Finding, however, that this position did not afford sufficient scope for his pathological studies, he became a candidate in the spring of 1876 for the office of Pathologist to the General Hospital, Birmingham, to which he was appointed. In addition to finishing his labours on the brain in insanity, Dr. Saundby has published numerous papers on the various aspects and anatomical conditions of Bright's disease, on heart diseases in relation to Bright's disease, on the disappearance of the aortic regurgitant murmur, on diabetes, especially in regard to its treatment and the phenomena of diabetic coma; on the treatment of consumption, on chronic lobar pneumonia, on hepatic cirrhosis, on locomotor ataxy, on migraine, on alcoholic paralysis, etc.

Dr. Saundby was elected Assistant Physician to the General Hospital in 1877, in which year he took his M.D. degree in Edinburgh, and he became Physician to the Hospital in 1885. He is Consulting Physician to the Birmingham and Midland Counties Eye Hospital, and the Birmingham Hospital for Women. He was elected a Fellow of the Royal College of Physicians last year, and is also a Fellow of the Royal Medical and Chirurgical Society, and a Member of the Pathological Society. For ten years he was Librarian to the Birmingham Medical Institute, of which he is now Vice-President, and he was for nine years editor of the *Birmingham Medical Review*. He married, in 1880, Mary Edith, daughter of the late Mr. Thomas Spencer, a well-known South Staffordshire ironmaster.

Original Communications.

LECTURES ON GYNÆCOLOGY.

I.—MALFORMATIONS.

BY LAWSON TAIT, F.R.C.S.,

PROFESSOR OF GYNÆCOLOGY, QUEEN'S COLLEGE, BIRMINGHAM, ETC.

CHILDREN are sometimes brought to us with congenital malformations, which make it a matter of difficulty to determine which sex they belong to, and there are others who are referred to one sex or the other by their parents without the direction of a skilled opinion. In these latter cases, awkward mistakes are sometimes made, which have to be rectified in later life. There are many historic cases of males being married as women, and of women who have been placed in the positions of men. I know of one male, belonging to a wealthy family, who was christened as a girl, and still, at an advanced age, is regarded as belonging to the other sex, and dresses accordingly. These cases of malformation are always very distressing to the parents, and they become afterwards a great trouble to the patients themselves. They may be divided into two classes for clinical purposes—those in which an arrest of development in the male organs give them an appearance as if the child belonged to the female sex, and those in which an excessive development makes the female organs resemble those of the male.

The first of these two classes is by far the more common of the two; and in all cases of difficulty it is a good rule to assume that it is a male child, unless the contrary can be shown, for in this way lamentable mistakes may be avoided. By the time a male arrives at the time of marriage, he will have learnt, from the education which all men go through soon after puberty, whether or not he has marital capacity; and if he finds that he has not, he will not attempt to enter married life. But the majority of women enter the married state with but a very hazy notion of what its functions are, a misfortune to which a large proportion of their special diseases may be attributed. If a malformed male, therefore, should be brought up as a woman, he may enter, and in many instances actually has entered, the state of marriage utterly unaware of his misfortune.

The vestibule of the human female is homologous with the membranous, and partly with the prostatic portions of the male urethra, and in some few instances the male urino-genital canal becomes so modified in form as to be indistinguishable from that of the female. The points of entrance of the Wolffian and Cowperian ducts into the urino-genital sinus of the male, and of the Mullerian and Bartholmian ducts in the female, indicate the corresponding segment of the canal in the two. In women, the urino-genital canal (vestibule) measures only an inch in depth, whilst the vagina is four to six inches. In many mammals, however, the urino-genital canal is proportionally much longer than in the human female, and presents an approach to the tubular form in the male of the same animal. In the cow and giraffe it is much elongated, and in the lemur it is one-third of the length of the vagina, whilst in the Platyrrhine monkey its length quite equals that of the vagina. In the higher or Platyrrhine monkey the urino-genital canal is always shorter than the vagina, indicating an approach to human proportions.

Cases of extroversion of the bladder, a deformity which occurs much more frequently in male than in female children, has been set down as one of the forms of spurious

hermaphroditism, which renders the determination of the sex difficult. But in those cases where it really does so, the arrest of development is so great as to render any question of marriage impossible. So also we may dismiss the cases where the penis has become adherent to the scrotum, or otherwise covered by integument; for such cases will reveal themselves at puberty, and no greater misfortune than an error of nomenclature will have been experienced. The real difficulties occur in those cases in which the deformity is due to an arrest of development causing incomplete closure of the genital raphe. These malformations are, in fact, a reversion of type to those classes of animals in which there is a cloaca, or common outlet for the genito-urinary apparatus and the intestinal canal. The two folds which are developed from the walls of the cloaca early in the life of the human embryo unite more or less imperfectly, and the results vary according to the degree of imperfection. Thus, if the first pair of folds do not unite, the cloacal arrangement of the bird is retained; whilst if the second folds remain separate anteriorly from the pelvic portion, the separate arrangement of the urinary and genital canals seen in females—where the vulva only forms the common canal—is established. The sexual differences, as far as the external genitals are concerned, date from this point; the organs of the male, by which the genito-urinary track is continued through a common tube from the pelvis, being formed by a further union of the anterior folds. Other changes, of course, take place in the surface of the Wolffian bodies, where the same structures are developed into ovaries or testicles, as the case may be. If, then, we have testicles formed in the abdomen, whilst the anterior cloacal folds do not unite further than their pelvic portion, we have a product which is the kind of spurious hermaphroditism now under consideration. When a case of this kind presents itself, its most striking feature is a median cleft with two lateral eminences, which looks exactly like the orifice of a vagina bounded by its two labia. At the anterior commissure is a stunted penis, which may be mistaken for a hypertrophied clitoris. But if the structures be examined carefully, there will be usually no difficulty in determining that this fissure is merely the open urethra, the supposed clitoris being grooved in the same way as the glans of the penis in hypospadias, and the mucous membrane of the unclosed urethra is distinctly marked on the under surface of the stunted penis. If there is a second canal, the sex of the patient is beyond doubt, and this is also the case if testicles can be found in the left scrotum, the halves of which represent the labia. In a case I saw lately in Wales, the presence of the second (genital) canal behind that which was clearly urinary, clearly enough indicated the sex. But on one side was attached a clitoris which had a ludicrous resemblance to a minute penis, and this had led the majority of those who had seen the child to pronounce it to be a male. Some years ago I was called upon, in conjunction with my friend, Mr. Langley Browne, to pronounce an opinion on the sex of two children sent over from Turkey for that purpose. They were aged nineteen months and nine years respectively, and had both been baptized and brought up as girls. Without doubt, however, they are both males, and the elder had already given evidence of coming functional activity. These children have since clearly indicated their true sex.

But in many of these cases the testicles either do not descend at all, or do so only incompletely, and they must therefore be searched for carefully in the inguinal canal. If they are not to be discovered, then, having found the



*Yourisomy Truly
Robert Sandby*

urinary orifice, a separate genital canal must be looked for, and unless it can be demonstrated, the suspicion must be entertained that the child is a male. But it must be borne in mind that there is a peculiar union of the labia minora (cellular atresia, to be afterwards described), which may completely hide the genital orifice. I have been very often called in to give an opinion on the sex of children where this cellular atresia of the nymphæ constituted the whole difficulty. Where this condition exists, there is always a space behind the urinary orifice which is suggestive of its existence, and a touch of the probe will decide it at once, without the possibility of doing mischief. If after this no genital orifice can be discovered, let the patient be considered as a male; for if brought up amongst males, but little harm can come to him. If, however, an individual were brought up amongst girls who turned out to be a semi-competent male, no end of mischief might accrue, as is amply proved in the case of Madelaine Mugnoz, the nun of Ubeda, who suffered death for rape.

I was consulted in the case of a prisoner in the ——— prison, who was confined on the male side, and who for thirty-seven years had passed as a male; but I detected a small, yet quite distinct, genital canal behind the urinary orifice, which was decisive of the person being a woman. I obtained a photograph of her naked; and the outlines of the figure, having the wide pelvis, narrow chest, and in-turned thighs, quite confirmed my opinion. No appearance of menstruation had ever been noticed, and she had never entertained any partiality for either sex—facts probably due to an infantile condition of the internal organs as marked as that of the external. The facts were fully placed before her, but she begged of us never to reveal her secret, and she served out her time as a male convict. She was of a strong and robust frame, so that no harm was done.

Deformities of the external genitals of female children are much less complicated, and *much* more rare, and are far less likely to lead to mistakes than those already described. Only two varieties of malformation have been described as of importance—that in which the clitoris is abnormally enlarged, and that in which the cervix uteri is elongated and protruded. I have now in my possession a preparation of a newly-born child, in which the cervix is protruded from the vulva nearly a centimetre; but I can hardly imagine such a protrusion being taken for a penis, save by a very careless and hasty observer. Even the case of Marguerite Malann, described in the *Philosophical Transactions of London* for 1686, where the cervix is stated to have been seven inches long, we can only accept the mistake as being due to the credulity of the observers.¹

Abnormal development of the clitoris has come under my notice several times, and in a young infant it certainly has a startling resemblance to the small organ of a male child on superficial examination; but the separation of the labia at once reveals the orifice of the genital canal behind that of the urethra. If cellular adhesion of the nymphæ should co-exist with enlargement of the clitoris—a combination not impossible, but hitherto unrecorded, unless we accept the anomalous case recorded by Arnaud in his "Dissertation sur les Hermaphrodites" (p. 265) as an instance—a mistake would be possible, but all doubt certainly would be removed at the first occurrence of menstruation, as it was in Arnaud's case. Even with this

combination, however, a scratch with the surgeon's knife would at once remove all possibility of error.

Acquired malformations are exclusively the result of injuries, or of cicatricial contraction from ulceration or sloughing. Cases of this kind must be very rare, for I have met with only one instance of serious deformity of this kind, and the general principles of treatment do not differ from those demanded by congenital deformities.

A very interesting and singularly little known malformation of the female genitals is that for which there has been proposed the name of cellular atresia. This term is not a very happy one, for it does not give any clear notion of the condition. It was first used by Bokai, from whom Steiner has taken a description ("Compendium der Kinderkrankheiten," 1874); and these two authorities are, so far as I know, the only ones who make any reference to this interesting malformation. Yet it cannot be very uncommon, for I have seen at least twenty cases in hospital and private practice. All these were infants, as might be expected, with one exception; for a mother's anxiety always detects any malformations of the genitals very early in life. In the exceptional case the girl was between eleven and twelve years of age; but with the addition that the union was much more firm than in the infants, the conditions were identical in all. When the labia majora are separated in such a case, it seems as if the skin of the one passed over on to the other, forming a continuation of the perinæum, obliterating the vestibulum vaginae, as in the guinea-pig. Only a small aperture appears at the anterior commissure, corresponding with the urinary orifice; but if careful search be made with a probe, immediately behind this an aperture will be found leading into the vagina, and a sharp tear with the probe will destroy the adhesion, and put the strictures in their normal relations. There can be little doubt, I think, that this form of atresia is a malformation by hypererchesis, a partial union of the anterior cloacal folds for the continuation forwards of the genital and urinary tracks in a common canal, as in the male; whilst the internal development has resolved upon ovaries instead of testicles. If a case should be found where this closure had advanced so far as to produce a rudimentary urethra on the under-surface of an enlarged clitoris, we should have an exact reversion of type to the condition of the female organs of the *Loris gracilis*, a small nocturnal lemur which inhabits Ceylon, and which, curiously enough, has no tail.

Both Bokai and Steiner speak of having seen cases where the atresia was incomplete—that is, I presume, where it had not extended forwards close to the meatus urinarius. I have never seen any in which it was not complete. The union in the human nymphæ is, of course, cellular, as all other adhesions are; but I think that this interesting malformation is deserving of a more distinctive title, and the most appropriate which I can manufacture is "congenital cheilosynclisis."

THE GENERAL PRACTICAL USES OF ELECTRICITY IN MEDICINE AND SURGERY.

By W. E. STEAVENSON, M.D., (CANTAB.), M.R.C.P.,

IN CHARGE OF THE ELECTRICAL DEPARTMENT (LATE CASUALTY PHYSICIAN TO) ST. BARTHOLOMEW'S HOSPITAL; PHYSICIAN TO THE GROSVENOR HOSPITAL FOR WOMEN AND CHILDREN.

(Continued from page 205.)

The Treatment of Strictures by Electrolysis, including Stricture of the Urethra.—In 1839 Crussel began his investigations on the use of electrolysis in surgery, and appears to have been the first who suggested its use in the treatment

¹ From the *Transactions of the Royal Society*, vol. iii., p. 356, I translate the following:—"The member (penis) is well formed, except that it has no prepuce, and that there is no appearance of testicles. The menstrual blood also flows from its orifice. After having consulted Messieurs the Vicar-Generals, we made him dress himself as a man!"

of stricture of the urethra. The method was revived in 1867 by Mallez and Tripier in Paris, and about the same time by Althaus in this country. During the last decade it has been developed and improved by Dr. Robert Newman, of New York, to such an extent that it has now become one of the recognised modes of treatment of stricture. Soon after my appointment to the Electrical Department at St. Bartholomew's Hospital in 1882, my attention was called by Dr. Shelly, of Hertford, to the success achieved in America by this mode of treatment. I then had electrodes made for the purpose of carrying out the treatment, but was not able to use them until the autumn of 1885, when Mr. Bruce Clarke, one of the assistant surgeons to the hospital, kindly helped me. Since then we have had numerous cases which have established beyond a doubt that electrolysis is one of the most efficient and satisfactory modes of treating stricture of the urethra. The same electrical action has been used in the treatment of other abnormally narrowed and strictured passages of the body, such as stricture of the œsophagus and rectum, stenosis of the os uteri, obstruction of the lachrymal canals and of the eustachian tube.

Electrolysis is the name given by Faraday to the property that electricity possesses of splitting up all chemical compounds, that are conductors, into their constituent elements or radicals. The chemical compound must be in a more or less liquid condition, and is called the *electrolyte*. The points or surfaces at which the decomposition becomes manifest are called *electrodes*. The electrode connected with the positive pole of the battery is called the *anode* (or way up), and that attached to the negative pole is the *cathode* (or way down). The molecules of the electrolyte split up into elements or radicals, which are called *ions*; those appearing at the anode are called *anions*, and those appearing at the cathode are called *cations*. The ions may be single atoms of an element, or molecules which act chemically as radicals. "There is no direct attraction between the electrodes and the ions themselves, but the relation depends simply upon the temporary polarity they assume in the circuit."¹ When bodies composed of two elements are decomposed, one element turns towards the positive and the other towards the negative pole. The elements which separate at the positive pole are called *electro-negative*; they are the acid radicals, such as oxygen, chlorine, SO_4 (sulphion), etc.; while those which separate at the negative pole are called *electro-positive*, or basic radicals, as hydrogen and metals.

All the elementary substances have been arranged in an *electro-chemical series*. About fifteen of these elements occur in the human body, and can be thus arranged:—

ELECTRO-NEGATIVE.		ELECTRO-POSITIVE.	
Oxygen	Chlorine	Hydrogen	Calcium
Sulphur	Phosphorus	Iron	Iodium
Nitrogen	Carbon	Manganese	Potassium
Fluorine	Silicon	Magnesium	

Each element in the series is electro-negative to the one following it, but electro-positive to the one which precedes it. A compound of any two of these elements when decomposed by a current of electricity splits up into its components in the same proportions as those in which they combined—viz., their chemical equivalents, not into the proportions of their atomic weights. Thus, in the electrolysis of water there will not be one atom of hydrogen liberated at the negative pole, for every sixteen atoms of oxygen at the positive, but there will be two atoms of

hydrogen for every sixteen of oxygen, that is, in proportion to their chemical quantivalence. In the decomposition of a solution of iodide of potassium, the iodine is liberated at the positive pole, and the potassium at the negative. The potassium immediately decomposes the water, and hydrogen is evolved. This constitutes secondary electrolysis. In very complex substances, such as those of which the human body is composed, double decompositions take place. The tendency of the galvanic current is to split up the tissues into their simplest elements or radicals; but some of these elements and radicals when in a nascent state seize readily upon other elements or compound radicals in their immediate neighbourhood with which they can easily combine. This makes the subject of electrolysis, when applied to the human body, such a difficult one. It is impossible in the present state of our knowledge to say how many decompositions and fresh chemical combinations take place at either electrode. Animal tissue itself is such a complex substance, and the combinations of elements are so various, and in so many different proportions, that it is almost impossible to make a correct analysis; decompositions and re-combinations must vary with every description of tissue experimented on. Tissues that we call by the same name vary in their composition in different parts of the body, the same elements combining in different proportions in different situations. For instance, in the case of fat, stearic and palmitic acids are present in greater proportions in one kind of fat than in another. Therefore any attempt to explain the exact decompositions and re-combinations which take place would fail, and if correct for one tissue would not hold good when applied to any other, or to the same tissue in another situation. The main facts of electrolysis can only be stated.

By the investigations of Althaus and others it has been shown that at the negative electrode the potassium and sodium contained in animal tissue are liberated, as they would be in any solution of an inorganic compound that might contain them when subjected to a current of electricity. The freed potassium and sodium while in a nascent state seize upon the oxygen in the watery constituents of the body and form caustic potash and soda, liberating hydrogen, which appears as bubbles of gas. The bubbles of hydrogen are said also to act mechanically, and by insinuating themselves between the cells or fibres of the tissue being electrolysed, split them apart, and thus accelerate their disintegration. The caustic potash and soda which are formed combine with any fatty or other constituent of the tissues with which they can form soap, and a deliquescent eschar is the result which gives an alkaline reaction to test paper. The action around the negative pole extends farther into the surrounding tissues than that around the positive pole, and therefore, if the current is continued for a long time a slough is produced, as it would be produced by the action of caustic potash or soda. No doubt other and numerous chemical changes take place at the negative pole, and to these other decompositions are due the better results which follow the treatment of unhealthy and ulcerated surfaces by electrolysis than when treated by simple caustic alkalies.

At the positive pole oxygen and chlorine are liberated, and the reaction to test paper is acid. The tissues become oxidized, are deprived of their moisture, and are more or less charred, as after cauterization with a strong acid, such as sulphuric acid or nitric acid. Metals are decomposed, and, by the theory of Grotthüss, have a tendency to pass

¹ "Electricity." By John T. Sprague. London: E. & F. N. Spon.

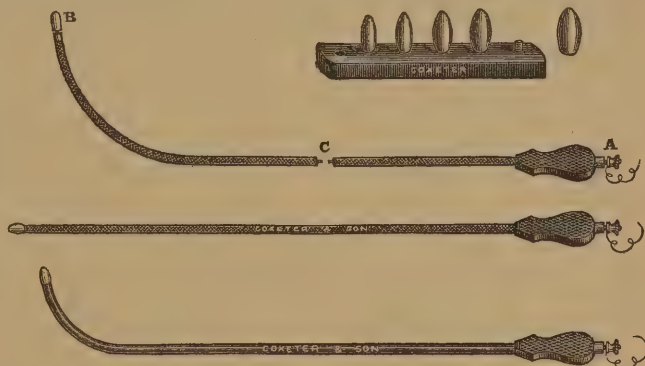
over and be deposited at the negative pole. The composition of the needles or electrodes employed in electrolysis is therefore a matter of consequence. The negative pole has no action upon metals, therefore an electrode attached to it remains as clean and bright after as before an operation. This is not the case with the positive needle or electrode, for the metal itself suffers decomposition during the process of electrolysis. This action of the positive pole is useful under certain circumstances, but in the treatment of stricture the negative pole only is used internally. Other changes take place in animal tissue subject for some time to the passage of an electric current. The chemical constitution of some of the cells is so altered as to render them capable of re-absorption. This is one of the reasons why fibroid tumours and the gristly thickening about strictures are found to gradually decrease for several days after the application of electrolysis. Some of the constituent parts of these adventitious growths are so changed that they can be again absorbed; and during the passage of an electric current, if not afterwards, ordinary osmotic action is increased in the direction from the positive to the negative pole. This would also, to some extent, account for the more ready re-absorption of any matter in a condition for being so disposed of.

The theory of Grotthuis, in which the electrolyte must be fluid, and in which no action takes place along the course of the current, but only at the surface of the electrodes, is not quite applicable to animal tissue. In fact, the action of electricity applied to the human body is not pure electrolysis, but a combination of primary and secondary electrolysis¹; the several compounds forming the tissues acquire different polarities, and act and react upon each other. It was shown by Dr. Stone, in his recent lectures before the Royal College of Physicians,² that the human body, after the passage of a continuous current of electricity for some time, becomes to a certain extent a kind of secondary battery, and gives off a current for some hours that is capable of deflecting the needle of a galvanometer; in fact, a certain amount of electricity becomes stored up in the animal tissues by polarisation taking place in the cells of which the several structures of the body are composed, and which are traversed by the current.

Electrolysis must be distinguished from galvano-cautery. In galvano-cautery we use the power that a large quantity of electricity has of heating a platinum wire to redness, white heat, or even to the fusing point, and its action on the tissues is exactly the same as the actual cautery. The tissues are really burned—destroyed without any relationship to their chemical composition. But with electrolysis, the chemical action of electricity is used. We employ an electric current of "high tension," as it is called, that is possessing a great current strength, which, when a great external resistance has to be overcome, as in the decomposition of water or the human body, depends upon a high electro-motive force. Chemical combination and decomposition is always accompanied by a rise of temperature, slight in some combinations, greater in others. The heat evolved in electrolysis is the same as heat evolved in other chemical processes, such as that which is familiar to us in the combination of sulphuric acid with water. But no greater heat is evolved in electrolysis than is dependent upon the activity of the chemical decomposition. In the electro-

lysis of water the heat produced is inappreciable, except with the most delicate tests, and in the decomposition of nævi appreciable heat is only evolved when the action is very rapid. Electrolysis is really a chemical decomposition by means of electricity, while destruction of tissue by galvano-cautery is accomplished by actual heat, without any regard to the chemical composition of the parts destroyed. This much is necessary to clear up a very common error that prevails—viz., confounding the two processes of electrolysis, and the use which is made of the heating power of electricity, called galvano-cautery.

In the treatment of stricture of the urethra by electrolysis, the best form of electrode is a catheter-shaped gum-elastic bougie, having an olivary-shaped metal end (see fig. B), connected by a copper wire (seen at C), with a Brodie's handle, on which is a binding screw (A). A common stem has been made so as to carry different sized olivary ends, as seen in the diagram. These electrodes, consisting of an insulated copper wire, are as flexible as ordinary gum-elastic catheters, and can be bent to any curve that will suit the operator; but a set of firm electrodes are also made which can be directed as accurately as a silver catheter, these latter are pictured in the bottom figure of the diagram. The olivary ends in all these electrodes are nickel-plated.



There is no necessity to employ platinum as they are always used attached to the negative pole of the battery, and therefore not affected by the current. In one or two cases so little sensation was produced in the patient by the passage of the current, that it was difficult for him to believe that any decomposition of his stricture was taking place. The current was, therefore, once or twice reversed, by means of a commutator, with the result of immediately removing the plating from the electrodes. The shock of making and breaking the current soon satisfied the patient that some uncommon force was present in his urethra.

An electrode attached to the positive pole is placed under the patient's back, or on some other indifferent part of the body. The best electrode for the purpose is one made of tin, on to which is stitched some amadou or house flannel for the purpose of retaining moisture (see fig. 1, p. 203). This pad is moistened in salt and water, and then placed in a cover, one side of which is made of waterproof, so as to protect the bed clothes or couch. It is best to have the patient lying on his back.

The position of the stricture is first ascertained by the passage of an ordinary bougie, on which a mark is placed to show the distance from the meatus. A similar mark may be made on the electrode it is intended to use, so as to make certain when the metal end is in contact with the stricture. An electrode is used which is one size larger

¹ See Sprague on "Mixed Electrolytes," op. cit., p. 374.

² Lumleian Lectures (*British Medical Journal*, vol. i., 1886, pp. 728, 812, 863).

than the calibre of the stricture will admit. If no instrument can be made to pass the stricture, then it is best to use an electrode of about No. 5 or 6 English scale. In these cases two or three applications of the current may be necessary before the electrode will pass the stricture. The most rapidly successful cases are, of course, those which could be treated by ordinary dilatation. It is perhaps an unfairly severe trial of the method to select only those cases which resist all other forms of treatment; they are also, of course, the most difficult to treat by electrolysis. When the electrode it is intended to use is in position against the stricture it is attached to the negative pole of the battery by a wire from the screw (A) on the handle. The circuit is then closed, and the strength of the current gradually increased to five or six milliampères. A current of greater strength will produce pain. To ascertain the strength of the current it is necessary to include a galvanometer in the circuit, either between the negative pole and the bougie electrode, or between the positive pole and the pad on the back. Sufficient accuracy cannot be obtained by simply considering the number of cells employed, as cells vary in strength according to their composition and the length of time they have been in use. No anæsthetic is required; in fact, it is an advantage that the patient should be conscious, so that he can say if the current appears to be too strong. The electrode is kept gently pressed against the stricture; no force is to be used, but the electricity allowed to do the work. If the electrode is forced through the stricture, the operation amounts to little more than ordinary rapid dilatation. The attention must be kept continually on the electrode, so as to guide it in the right direction; otherwise, a false passage may be dissolved into the side of the urethra. Immediately the electrode passes the stricture, the current should be turned off and the bougie withdrawn. The time occupied in dissolving the stricture varies according to its density and length, but is usually from ten to five and twenty minutes. If the electrode has not passed the stricture before the expiration of twenty-five minutes, it is best to turn the current off, and continue the treatment on some future day. Even if the electrode has not passed, great benefit is often derived from the use of the current; the difficulty in passing the water is relieved, and the size of the stream enlarged. When the electrode is withdrawn, the patient is left undisturbed for a week or ten days, sometimes for a fortnight. It is then found that a bougie, larger than the electrode which passed on the last occasion, will now pass the stricture. If the French scale is used, two sizes larger will often be found to pass; taking the English scale, about one size larger can be used each time. The operation is then repeated with the larger-sized electrode. The number of times it is necessary to perform the operation depends greatly on the calibre of the stricture when the treatment was commenced. The great success achieved by Dr. Newman, of New York, is mainly due to the employment of weak currents, and the frequent repetition of the operation. There is no comparison between the treatment of stricture of the urethra by the ordinary methods and its treatment by electrolysis. Should the permanency of the good results prove to be, as a rule, not so great as those recorded, still the calibre of the stricture remains enlarged for a longer space of time than after any other form of treatment.

In the *New England Medical Monthly* for December last, an editorial article was published under the heading: "What is the present state of Electrolysis in the treatment

of Urethral Stricture?" The article says: "Not long ago physicians and surgeons of repute flouted the treatment of urethral strictures by electrolysis. Now it is so generally and successfully practised that scarcely anybody opposes it. This change of opinion is undoubtedly due—first, to the better understanding of the electrolytic treatment distinguished from the 'galvano caustique'; secondly, to the successful treatment, without relapse, of a large number of cases (fully reported) by many physicians of high repute. It is undeniable that the method now adopted was first grasped and put forward by Dr. Robert Newman, of New York, who despite the misrepresentations and abuse of the ignorant, has zealously laboured for eighteen years to perfect the instruments used and the technique of the operation, until by extraordinary success the most sceptical are convinced.

"Experiments in the treatment of stricture with electricity have been made since 1847, and until 1872, without any method, except such as destroyed tissues by too strong currents. Mallez and Tripiet called their method 'galvano caustique,' showing that they used a current with caustic, not electrolytic action, and therefore they naturally failed. The present method is electrolysis, with weak currents applied at long intervals, resulting in galvano-chemical absorption, known and recognised as Newman's method. Newman not only introduced and perfected the electrolytic method, but also invented and perfected instruments for use in the operations, so that failure in the operation is hardly possible. In England, eminent surgeons so fully comprehend and acknowledge the great value of this method, that it is taught at the medical schools as one of the ways of treatment of urethral strictures. In St. Bartholomew's Hospital an additional department has been established for treatment in this way, and many successful cases have been reported by Dr. W. E. Steavenson and Mr. W. Bruce Clarke.

"The following bibliography of articles, reports, and lectures, which have been published, will prove of value to the student and practitioner who is interested in this subject, and who is not?"

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SKETCH OF THE CORONER'S COURT, AND ITS PRINCIPAL RELATIONS TO THE MEDICAL PROFESSION.¹

By JOHN EATON, M.D.

(Continued from page 253.)

CORONERS should always wait until they are sent for by the peace officers of the place, to whom all violent, unnatural, sudden, or mysterious deaths, must be, without delay, reported by those in whose houses such a death may have occurred; but unless the circumstances are suspicious, the coroner need not interfere or hold an unnecessary inquest. On receiving notice, the coroner must, as soon as practicable, issue his warrant for summoning a jury, and proceed to the place where the body lies, or he is liable to a fine of one hundred shillings, and he is now also liable to attachment (23 and 24 Vict. c. 116, s. 5).

If a precept be issued, and a jury summoned, the coroner must, unless he has adequate reasons for not doing so, proceed with the inquest. He must restrict his inquiry to the cause of death, of the subject of the inquest, inquiring of accessories before, but not after the fact. He must act only on bodies found lying dead, or that have been washed ashore, and are dead within his district, except when the coroner of another district within the

same county is ill, incapacitated, or unavoidably absent from his district, or while the office is vacant; and the cause of his taking such an inquest must be stated in the inquisition. The jury must consist of at least twelve persons, for twelve must agree in the verdict; and they must be taken from within the jurisdiction of the coroner. Clause 3, Coroners' Act, 1887, specifies that the jury must not be less than twelve, nor more than twenty-three. The coroner and jury must view the body at the first sitting of the inquest, but not necessarily together. The inquest need not be taken at the place where the body is viewed, and the coroner may adjourn the jury from time to time, and from one place to another, provided the real place at which the inquest is held be stated in the inquisition, and that the view, and all other proceedings of the inquest take place within the jurisdiction where the body is lying dead.

An inquest held by a coroner without view of the body is void, and the view is so essential that the coroner is empowered to order a body to be disinterred, either to take an original inquisition, or a further inquisition when the first has been insufficient. If the body be not found, or has laid so long entombed that inspection of it cannot yield any information, or there might be danger of infection from exhuming it, an inquest ought not to be held by the coroner, unless he have a special commission for that purpose. In such cases, application should be made to the magistrates or justices authorised to inquire of felonies, etc., for they have authority, without viewing the body, to take the inquest by the testimony of witnesses. From the wording of the *Statute de Officio Coronatoris*, it would seem that anciently the body lay before the jury and coroner during the whole evidence. The coroner has also to inquire of all circumstances attending the death, for example, if the deceased were killed by a fall of a bridge out of repair, or were drowned in an imperfectly guarded pit. The township, if responsible, might be amerced by the justices of gaol delivery.¹ He has power to summon anyone likely to be able to give material evidence; can

¹ As indicating an extent of jurisdiction which many would not have thought a coroner entitled to, I may quote the case of a Welsh Mining Co.—the partners of which were committed for trial on a charge of manslaughter by the coroner, on account of a man having fallen down a shaft—the condition of which was not in accordance with the Mines Regulation Act. The newspaper report reads thus: “A protracted inquiry was closed yesterday, January 18th, 1887, at Meliden, before the coroner for Flintshire and a jury, into the circumstances connected with the death of John Griffiths, who was killed by falling down the shaft of the Talacre Lead Mine. Dr. Clement Le Neve Foster, inspector of mines, deposed that when he visited the mine he was not aware that the men were in the habit of descending the Sawney shaft by the ladders, or he should have advised the erection of stages at distances of twenty yards. The ladders were in accordance with the Act, but there were no planks to divide the ladders from the shaft, nor were there stays, as required by the Act. The jury returned a verdict ‘that the deceased met with his death by falling down the shaft, which was left open through the neglect of Captain Henry Ellis and the company.’ The verdict amounting to one of manslaughter, the shareholders and their agents were committed for trial. The syndicate who work the mine consists of the following gentlemen: Mr. Henry Bowers, Abbot's Lodge, Chester; Mr. James Hassal Ffoulkes, Gresford-place, Wrexham (the High Sheriff of the County of Denbigh); Mr. T. P. R. Royle, Hough Green House, Chester; Mr. Robert Wright, Tyn-y-Celyn, Bodfary; Mr. Urias Bromley, Plas Morfa, Holywell; Mr. John Kenyon, Balloon-street, Manchester, and Mr. Henry Ellis, the captain of the mine.”

“At Rhyl, yesterday, January 21st, 1887, the extraordinary charge of manslaughter brought against all the members of a Welsh Mining Company was investigated by a full bench of magistrates, and on its being shown that the captain of the mine had warned the men, including the miner who was killed, against using Sawney shaft, the case was dismissed.”

¹ Read before the West Cumberland Medical Society, at Whitehaven, May 25th, 1887.

fine to the extent of 40s. anyone who disobeys that summons; and, in certain cases, can commit for contempt of court.

It is the duty of the coroner to put in writing as much of the evidence as may be material given to the jury before him, and if possible in the exact natural language and peculiar expressions used by the witnesses. When the evidence appears to be exhausted, the coroner draws up the inquisition according to the finding of the jury, and he and they put their hand and seals to it, after which no second inquisition on the same matter can be held, unless the first be quashed. If the verdict be murder or manslaughter the coroner must bind over the witnesses to appear at the Court where the case has next to be tried, and must also issue his warrant to apprehend the offender and commit him to prison, and when the public prosecutor informs the coroner that criminal proceedings have been undertaken, the coroner must transmit all the documents connected with the matter to him. When proceedings are closed, or before an inquest is adjourned, the coroner issues his warrant for the burial of the body.

The jury cannot be properly sworn except by the coroner. A borough coroner, in case of illness or unavoidable absence, must appoint, by writing under his hand and seal, as a deputy a fit person, being a barrister-at-law or an attorney of one of the Courts at Westminster, not being an alderman or councillor of such borough; and the mayor, or two justices of the borough, are, on each occasion that the said deputy acts, to certify the necessity for his appointment, and to state the cause of the absence of the coroner.

County coroners can appoint deputies subject to the approval of the Lord High Chancellor, Lord Keeper, or Lords Commissioners of the Great Seal, and the deputy is usually required to be a properly qualified legal or medical practitioner, of at least twenty-seven years of age. A duplicate of the appointment of the deputy must be transmitted to the clerk of the peace for the county, riding, liberty, or division, in which the coroner shall reside, and the coroner can cancel at any time the appointment of his deputy. If an inquest has begun before the deputy of a county coroner, and the jury have been sworn, the deputy should finish the proceedings, though the coroner be present, but that is not so with borough coroners.

The law is also exceedingly strict with regard to the integrity of coroners. Coroners concealing felonies, or not doing their duty, through favour to the misdoers, shall be imprisoned a year, and fined at the King's pleasure. In Lord Buckhurst's case a coroner was removed, and fined £100, for favouring the prisoner, by keeping the inquisition in his pocket, and not returning it at the next gaol delivery. In the case of *Rex v. Harrison* the same punishment was imposed, with six months' imprisonment, on a coroner who had accepted a sum of money for not holding an inquest, although it was not a case in which an inquest ought rightly to have been held. Sir John Jervis states that a coroner is criminally to blame if he takes an inquest without viewing the body, one instance being recorded in which a coroner was committed to prison and fined 40s., because he refused to view a body, unless he was paid for himself 6s. 8d., and for his clerk 2s. He states also that a coroner may be fined for disinterring a body that has been too long buried, and when a coroner inserted in the inquisition that three persons had been found guilty of murder by the jury, though they had found

only one guilty, he was indicted for and found guilty of forgery. A coroner cannot act as attorney, either by himself or his partner, in prosecution or defence of any person charged with any crime, at any inquest over which the coroner has presided, and if he is found to have done so, a judge may fine him to the extent of fifty pounds. There are a great variety of minute technical points, and forms which must be used connected with the Coroner's Court, which we can only thus allude to in this paper. The following curious and interesting particulars regarding it may however be noted.

It is an indictable offence to bury any person who has died a violent death before the coroner's jury have sat. The coroner in practice directs his warrant to the constables of the place where the party lies dead, and the jury are summoned by the officer of each parish. The jury must be able to write their names legibly upon the inquisition, and must be lawful and honest men, not aliens, convicts or outlaws; they ought also to be householders, and indifferent to the subject-matter of the inquiry, hence, for example, no officer of a prison, or prisoner, or anyone dealing with the prison, can act on a prison jury. . . . An inquest held on a Sunday is void. A juror not appearing after his name has been called three times, may be fined up to £2 by the coroner, or according to Coroners Act, 1887, up to £5. The body need not be stripped for the view, except to look for marks of violence. The medical practitioner called to an inquest should be able to identify the body. If a practitioner may be implicated in the death he cannot perform or assist at the *post-mortem* examination. If no other convenient place can be found, the body may be left at the house of the churchwarden of the parish. By Statute (6 and 7 Will. IV., c. 89, s. 2), it is enacted that when a majority of the jury think that the cause of death has not been explained satisfactory, they may cause the coroner to summon other medical witnesses to perform a *post-mortem*, with or without an analysis of the contents of the stomach and intestines. But this Act has been repealed, except so far as it relates to Ireland by Coroners' Act, 1887.

Medical officers of any public hospital or infirmary, or any county or other lunatic asylum, or other public medical institution, are not entitled to fees for inquests, but are liable to a fine of £5 for neglect of a summons to attend it.¹ Persons in custody, required as important witnesses, have to be examined in prison by the coroner and jury. Idiots, madmen, and lunatics cannot give evidence while in a state of frenzy, but during lucid intervals lunatics may be examined. The deaf and dumb may be examined through an interpreter, children may be examined on oath if intelligent enough. All evidence is given on oath or affirmation, the latter being done by Quakers and Moravians. Husband and wife can be compelled to give evidence against each other in civil cases, but not in criminal cases, unless when the crime has been committed

¹ From a note in the *British Medical Journal*, March 5th, 1887, p. 546, it appears that an honorary surgeon to a cottage hospital, when there is no resident house surgeon, may have a *post-mortem* examination to make, and an inquest to attend, and yet be refused fees by the coroner. It appears that by the Medical Witness Act, 6 and 7 Will. IV., c. 89, the medical officers of hospitals, whether supported by endowments or by voluntary contribution, were exempted from fees for giving evidence as to the death of patients dying within those institutions; and a decision about three years ago, in the case of the Medical Officer of Croydon Parish Infirmary *versus* the Coroner confirmed this, the judge after the case had been fully argued having carefully summed up in favour of the coroner.

by the one against the other. A coroner must hear evidence on both sides if given, but has no power to bind over the witnesses for the defence to appear. Ordinary witnesses can state such facts only as are within their knowledge, but scientific or medical witnesses are allowed also to state opinions, the weight of which, however, the jury determines. Not only the evidence of physicians, surgeons, and apothecaries, but that of hospital dressers, students, and quacks is accepted. Depositions before grand juries are not evidence, but those before the coroner are, because the party suspected has a right to be present and to cross-examine the witnesses. All who are summoned, suspected, or interested in the inquiry, or are inhabitants of the village or district where the body is found dead have a right to be present at the inquest, but over-riding this the coroner has also the power of admission or exclusion at his own discretion. It is usual to allow the family of the deceased, and anyone likely to be accused by the verdict, to be represented by counsel if they desire it.

It is the coroner's duty to explain to the jury the law applicable to the case, and the verdict should be compounded of the facts as detailed to the jury by the witnesses, and of the law as stated to them by the coroner. Should the jury decide contrary to the directions of the coroner upon the law, they cannot be punished, though the finding be improper. The coroner is bound to accept the presentment which the jury make. Jurors can call back at any time during the investigation any witness who has been examined to ask questions. At an inquest the jury are sworn to give the verdict, not only on the evidence, as at other courts, but also to the best of their skill and knowledge, and are entitled to the opinion of the coroner, to clear any doubt, or to explain any point of law. If twelve of a jury cannot agree, they can be kept without meat, drink, or fire, until they return their verdict. The coroner may detain them as long as he thinks fit, and he may adjourn them from place to place, or to the next assizes. It is doubtful whether legally he can discharge them without their giving their verdict.¹

When an inquest has been held on anyone killed on a railway, or who has died from injuries received on a railway, the coroner must, within seven days after the inquest, in the required form, make a return of the death and the cause of it, to one of the secretaries of State; and

¹ Such is the uncertain and complicated state of the law at present on this point, that circumstances frequently arise in which the coroner has to be guided in his procedure chiefly by his own discretion and readiness of resource, in illustration of which may be quoted from a Glasgow newspaper of January last a paragraph headed "Singular Conduct of a Jury."—"A Barnsley correspondent says:—One of the most remarkable circumstances ever known in connection with a coroner's inquest took place at Darfield, at a late hour on Monday night. As stated on Tuesday, the jury were closeted for fully three and a quarter hours. On the reporters being admitted, the coroner read to them the verdict handed to him in the terms stated in the report. Nothing passed to show that there were any dissentients, and the reporters left to catch the train. It appears, however, that when the formal document which the jury have to sign was passed round in the usual way, only eleven out of the fifteen persons who composed the jury would subscribe their names to the verdict as handed to the coroner. The coroner appealed to those who dissented, and their names were read over. They, however, positively refused to sign, and the coroner then bound all over in their own recognisances of £20 each to appear at Darfield on Saturday morning next to reconsider their verdict."—*Mail*, January 15th, 1887. Clause 4 of the Coroner's Act 1887, Sub-section 5, directs, in case of a disagreement of the jury, an adjournment to the assizes, which was common law, but not statutory, and it is well that the proper procedure in such circumstances has now been clearly defined.

borough coroners are required to forward to one of the secretaries of State, on or before 1st February every year, a statement of all inquests held up to the 31st December immediately preceding. Accessories can be tried and punished at any court having jurisdiction in the principal felony. A coroner or deputy can accept bail in cases of manslaughter.

A coroner has to pay the working expenses of his court out of his own pocket, and has to wait for reimbursement until the magistrates have passed his accounts, and he is the only judicial officer who is bound by law to do so. The Lord Chief Justice has not to meet the daily expenses of the Queen's Bench from his own pocket. This ought not to be the case with the coroner either. In the *British Medical Journal*, vol. 1, 1875, p. 223, there is a note regarding an army surgeon at Dover, who was paid a fee by the coroner for attending an inquest, and the fee was afterwards disallowed by the Town Council. It is worthy of note also that a coroner cannot admit evidence as to the mental condition of a person suspected of being culpable; as that question involves the question of criminal responsibility, it is always reserved for a superior court.

The chief relations of the medical profession to the coroner's court are, when a medical man is summoned to attend the court as a skilled witness; when he is ordered to make a *post-mortem* examination of the body; and when, where the death is suspected to be due to poisoning, he has to enclose the stomach and viscera, and certain internal organs, in a scrupulously clean vessel, which he has to seal with his own seal, and to transmit the whole to an analyst for chemical analysis. A very fair idea of the relations of medical men to the coroner's court in the capacity of a medical witness, a pathologist, and a scientific observer, may be obtained by consulting the abstract of the chief laws affecting medical men, by R. G. Glen, L.L.B., which is published annually in the "Medical Directory." That abstract entitled "The Duty of Medical Men as Witnesses," is as clear, concise, and able a statement of that part of our subject as can be met with, and must be more or less familiar to every one of us. We need not therefore recapitulate to any extent what is there given, but simply thus allude to it. It is impossible to exaggerate the importance of a sound knowledge of medical jurisprudence to every medical practitioner. Sooner or later almost everyone engaged in practice is called upon to take an essential part in medico-legal investigations, which certainly constitute the most difficult and trying of all the duties within our range.

We all know that in our medical schools, hitherto, analytical chemistry, microscopy, and pathology have been very much neglected, and though the last is by far the most important, and has been the least neglected of the three, the others are also necessary in order to give the medical man a thorough grasp of certain medico-legal cases in all their bearings. A comparatively small number of medical men may have had exceptional experience in the *post-mortem* room of the hospital while students, and others, from a special inclination for those subjects, may have devoted more time than others to the chemical laboratory and the use of the microscope; but in my time, about twenty years ago, the great majority left college very imperfectly qualified to undertake a medico-legal case, and it was only by dint of careful after-study of the best works on pathology and medical jurisprudence, and hunting through pathological museums whenever opportunities presented, that it was possible to keep something like

competent to undertake a difficult and intricate case of that kind. The prejudices of many of the people against allowing *post-mortems* of their diseased relatives, with the want of leisure, and the difficulty of obtaining appropriate assistance in the investigation of interesting and obscure cases occurring in the practice of the general practitioner, were apt to prevent necropsies from being undertaken. Besides medico-legal cases occurred usually at such intervals that the surgeon was apt to be caught unprepared just at the moment when his observation had to be as acute and perfect as possible.

In such cases everything must be carefully noted and recorded at the time, otherwise something essential may be neglected. The evidence given at the inquest may have to be repeated before the magistrates or at the assizes, and any important variation of the evidence at the various courts disparages the witness. Council, in framing their cross examinations, have copies of the depositions taken at the inquest before them. They have usually had plenty of time to look up all points of the case, and even to consult experts, in the interest of their clients, before they proceed to do their utmost to shake the medical evidence in the case. For these reasons—and as a hasty or crude opinion, not subsequently sustained, may cause a person charged with a crime to be wrongfully imprisoned several months previous to the trial—medical evidence must always be given deliberately and guardedly. In giving evidence, facts should be kept clearly distinct from opinions, nothing superfluous should be stated, and the language used should be simple, perspicuous, and, if possible, non-technical. In cases where death from poisoning has been suspected, the various analyses should not be described in detail, but merely the results stated that have been obtained by certain tests and processes. The life or liberty of a fellow-creature, or the life prospects of the medical witness himself, through loss of reputation, may be sacrificed by inaccurate or slipshod evidence. It is therefore a good rule never to give a conjectural opinion to anyone in connection with medico-legal work.

When a medical man receives an order from a coroner to perform a *post-mortem* examination, he cannot decline to do so without giving a sufficient reason, such as that he is ill, or incompetent—the latter it would be very serious to his reputation to plead—and other reasons short of actual illness might be deemed insufficient. When ordered, therefore, it is his duty to proceed with a view to the performance of the *post-mortem*; but if the friends obstruct him, he need not do so by force, but ought to return and leave the coroner to deal with those who have thus interfered. Some years ago, by order of the coroner, I examined in one day the bodies of three men who had been precipitated down a shaft in a pit cage, the rope having snapped. The people allowed me to proceed with the examinations so far, but became indignant before I had completed my duty, and quite mobbed me as I left, and it was years after ere their resentment had totally subsided. The lesson which I learned from their indignation and disrespect was to take more care in future to ascertain whether the friends were perfectly willing to allow the *post-mortem* to occur, and to leave the responsibility of pressing or enforcing a *post-mortem* in the hands of the coroner.

As the law stands at present, a medical witness is not entitled to any fee for information supplied previous to an inquest to a coroner regarding a death which is the subject of investigation—the only exception that I know of being

in Kent, where, by special arrangement, the coroner is allowed to pay £1 1s. for a preliminary report (*B. M. J.*, vol. ii., 1882, p. 1,077). If a medical witness has not been summoned in due form, and his evidence does not happen to be taken, he is not entitled to a fee for attending the inquest. He is therefore not bound to attend an inquest except upon a subpoena, which must have been served a reasonable time before the trial. Though in civil cases a medical witness is entitled to reasonable expenses a reasonable time before the trial, and before being sworn can decline to give evidence until these have been paid, in criminal cases no tender of fees is necessary to secure his attendance. When, however, witnesses in such cases, living in one part of the country are required to attend in another, they cannot be punished for non-attendance, unless when being summoned the amount of their expenses for going, attending, and returning, has been tendered to them. The fee for a medical witness attending on a subpoena at an inquest, whether examined or not, is £1 1s.; if with a *post-mortem* of the body, the fee is £2 2s. When an analysis of the stomach and intestines is required the magistrates usually allow a special fee to an expert, but as the law at present stands the fee of £2 2s. covers the inquest and *post-mortem* examination, and the requisite analysis is not separately provided for. No fees are allowed for attending adjourned inquests.

Usually no fees are allowed in England and Wales to any medical man whom the medical witness summoned may have called to assist him with the *post-mortem* examination. In the case of a lad, named Tumelty, who was shot fatally in the Cleator Moor Riot of 12th July, 1884, two medical men were allowed fees for the inquest and *post-mortem* examination, but that case was exceptional; and fees were also allowed for attendance upon those injured in that riot, though usually no such fees are legal unless someone is at the time in custody for the injuries under treatment. I understand that it was not till after the Home Secretary had been consulted that the magistrates of the county allowed these fees for medical attendance to be paid. In cases of summary conviction the allowance of costs is in the discretion of the magistrates, even the Secretary of State not being able to interfere with them. When a medical witness is summoned to a civil and a criminal trial, to occur on the same date, he should attend to the latter; and if summoned to two civil, or two criminal cases, to occur on the same date, the one first served should be attended to.

The medical man is also frequently called to persons found lying dead, or who may have died suddenly just before his arrival, and when he arrives he finds the police waiting for his opinion. If in these circumstances there is the slightest doubt of the cause of death he ought to decline to give an opinion. Generally every such case will be found to be doubtful, the only exceptions being in cases where he has been previously, and within a reasonable time, in attendance, and even then no certificate should be given if the slightest suspicion is apparent in the circumstances attending the death, for foul means may have contributed to the death of a person suffering from disease. In November, 1886, I was called to see a man, æt. fifty-seven, who had died suddenly. Another surgeon had been called, but failed to attend, hence the man had been dead several hours when I saw him. The right side of his face was purple, lips purple blue, lower jaw rigid, mouth half open, arms and thighs pretty rigid, legs and forearms could be flexed, pit of stomach warm, extremities and face cold,

fæces about anus and underclothes; was said to have been previously healthy. I declined to certify the cause of death without a *post-mortem* examination. The coroner held an inquest, stated to the jury that though Dr. Eaton had been called they were left in ignorance of what was his opinion as to the cause of death. . . . He had not ordered a *post-mortem* examination of the body, as he did not like to put the county to that expense unless it was the desire of the jury. . . . After some discussion the jury found that death was due to natural causes. In this case you will observe that the coroner spoke more like an advocate than a judge, and that the verdict of the jury was simply absurd, as no one could be certain of the cause of death without a *post-mortem* examination of the body. The law at present allows the coroner to decide whether an inquest is necessary, which, in such cases as this, he is utterly incompetent to do, even though he happen to be a medical coroner. In all such cases the coroner ought to be empowered to inquire by letter of the medical man who has been attending, or has been called in, or if no one has been called, to some medical man in the district who would guide the coroner safely as to the necessity for an inquest with or without a *post-mortem*, or a *post-mortem* and an analysis, the same fees to be allowed for the report as if the inquest had been held. Thus many useless inquests would be prevented, and their expenses to the county saved, and others that are now frequently allowed to pass would be held, giving satisfaction to the public in all doubtful and obscure cases, and acting as a powerful deterrent from crime, which was the chief object of the institution of the Coroners' Court. There can be no doubt that wherever medical evidence is not required the inquest is unnecessary, and that in the interests of public safety and science medical evidence should be taken in every case demanding inquiry, for with such rational precautions it is better that too many than too few inquests should be held.

Misunderstandings frequently arise between coroners and medical men in reference to medical evidence being dispensed with in important cases, where otherwise the true cause of death cannot possibly be known to the jury and coroner, illustrations of which are recorded in the *British Medical Journal*, vol. i., 1874, p. 256-292, where county coroners neglected to hold inquests over children found dead in bed, and in one case where a child was found dead in a *pot de chambre*. In vol. ii., 1874 (pp. 132, 633, 727, 803) cases are given where the inquests were simply farces, without *post-mortem* examinations. In vol. ii., 1875, p. 797, it is recorded that a child was found in the Irwell by a police inspector, and the verdict of the jury on his evidence was "Found dead," and there was no evidence to show that the child was born alive.

Dissatisfaction has also arisen where a coroner verbally, by a policeman, or otherwise *informally* has called a medical witness, has dispensed with his evidence at the last moment, and has consequently been unable to allow him a fee; but such a case has, fortunately, been exceedingly rare.

A grievance has arisen, also, where the coroner has ignored the medical man in attendance during the last illness of the deceased, and has called a surgeon from a distance to do the *post-mortem* examination and to give evidence at the inquest. I remember one such case at this moment, which occurred to one of our members in my district. The act of the coroner in that case was doubtless discourteous and improper; and though it was not an illegal act on the part of the coroner, he having power at his discretion to employ any surgeon, it was certainly an

act which no coroner should imitate. On the other hand I have known a medical man to perform a *post-mortem* examination on a body awaiting an inquest, without the coroner's order, which was an illegal act, for a body awaiting an inquest is in legal possession of the coroner. Even friends in such a case cannot permit anyone to perform a *post-mortem* examination, otherwise essential and important evidence of a crime might sometimes be obliterated. After the inquest is over, however, the medical attendant may make a *post-mortem* examination with the consent of the friends.

Coroners are sometimes rather curt and discourteous in their remarks regarding medical evidence. I remember one case, where a man had been killed instantaneously, by one kick in the neck at the top of the vertebral column, from an iron-tipped clog, and where death was found to have been caused by extravasation of blood around the medulla oblongata. The medical witness was amazed to hear the coroner say aloud before the jury, "We will take that opinion for what it is worth." Long afterwards the medical witness in conversation with the coroner learned that the latter was annoyed at the use of a technical term, which he did not understand, and which he thought had been used to befog him, and the medico then explained that no better term could be used in the circumstances, and carefully described where the part so named was situated, and mentioned its extreme importance in the continuance of life.

Numerous interesting points regarding the relations of the medical profession to the coroner's court, have cropped up in the *British Medical Journal* during recent years, of which the following statements are illustrations:—In the *British Medical Journal*, vol. ii., 1878, p. 39, it is recorded that a legal coroner informed a jury that the legs of a patient of Dr. Torrop's, of Morden, ought to have been amputated, and that thus the life would have been saved, though the doctor and others certified the opposite; and in the same journal, vol. i., 1881, p. 91, it is noted that a coroner has taken too much authority in guiding the jury to a verdict in a case. In vol. ii., 1884, p. 1027, a jury at Leeds criticises the medical treatment of a case; at p. 362, vol. i., 1886, a case of child murder is recorded where a jury refused to give the verdict "Found dead," and insisted on medical evidence; at p. 164, vol. i., 1872, when, to accommodate the family of a deceased man, the late Dr. Lankester ordered an inquest before a *post-mortem* examination could be made, although four medical men swore that deceased died of disease of the brain, the jury stated that the medical men *could not* know that unless they had examined the body, and they returned a verdict simply of "Died in a fit from natural causes;" at p. 274, it is noted that in Ireland, where 22.2 per cent., or 20 out of 90 of the coroners are medical men, grand juries frequently disallow the fees for skilled evidence paid to medical men by coroners; at p. 276, Ernest Hart, as Chairman of the Poor-law Committee of the British Medical Association, protests against the attempt of the St. Pancras Board of Guardians to cause the medical officer of their workhouse "to pay over all fees for *post-mortems* and coroner's inquests to the Board of Guardians, as such a regulation would tend to prevent inquests being held;" at p. 679, vol. i., 1873, note is made of a curious attempt, by means of strange orders given to the police how to act, to put down inquests at Bury St. Edmunds; at p. 642, vol. ii., 1879, it is related that a coroner got the hint not to have expensive inquests; at p. 355, vol. i., 1886, it is noted that even when the cause

of death is very obscure, coroners, except the circumstances point plainly to poisoning, or some form of violent death, content themselves with a vaguely worded verdict . . . which might as well have been left unsaid . . . perhaps this is due to their pecuniary dependence on local authorities . . . who are not remarkable for their perspicuity in matters scientific; at p. 126, vol. ii., 1885, it is noted that coroners are so poorly paid that medical coroners have usually to continue in practice; but at p. 481, vol. i., 1872, an important lesson is recorded for coroners and for magistrates who discountenance analyses and necropsies, and applaud coroners who do not run the county into expense for such unnecessary luxuries, for there a child died, and at the inquest the cause of death was certified as convulsions, due to the state of the heart and lungs, or to teething; the jury however ordered an analysis, and at the adjourned inquest the evidence of the same witness proved that death was due to arsenical poisoning. We need not I think proceed further adducing instances of the vagaries of coroners, magistrates, guardians, and juries, and the frequently strained relations of such to the medical profession, for such might be given almost indefinitely.

In another paper I shall give an account of the equivalents of our coroner's court, and the office of coroner in other countries, such as Ireland, Scotland, France, Germany, Greece, Russia, the United States of America, and particularly of Massachusetts, with a sketch of the reforms which have been proposed during the past eighteen years in the coroner's court; and we propose then to advocate that only medical men ought to be appointed coroners, or at least that no inquest should occur until a medical man has reported the necessity for it, and that if legal practitioners are to be retained as coroners, in every case the coroner ought to be guided as to the necessity for holding an inquest by the opinion of a regularly appointed medical officer as assessor.

There can be no doubt that ere long some radical change will be effected by the Legislature in the constitution of the Coroner's Court, and it is our duty to be prepared to protect the interests of our profession in the matter. At present, of the 348 coroners in England and Wales, only 49 are medical men, while 237 are members of the legal profession, and 62 are nondescripts, being neither legal nor medical practitioners, no wonder therefore that the legal profession has come to consider the office of coroner one of their vested rights.

Mr. W. H. Michael, Q.C., has stated, *B. M. J.*, vol. i., 1878, p. 31, that in 80 per cent. of the deaths that occur, medical is more important than legal knowledge in ascertaining the cause, a statement which is obviously well within the mark. The average medical practitioner is now quite competent to acquire a knowledge of all the law required to enable him to conduct a coroner's inquest. Sir John Jervis's "Treatise on the Office and Duties of Coroners," the Coroners Act, 1887, the Coroners Act, 1888, the Election of Coroners Act, 1888, and Sir J. F. Stephen's "Digest of the Law of Evidence," being sufficient for the purpose; and if the office of coroner was constituted by law a purely medical appointment, and the districts were so rearranged that the salaries would enable the coroner to ignore private practice, many medical men would devote special attention to forensic, pathological, and chemical studies, and thus become a most efficient class of crown officials, for carrying out the very important work which constitutes the chief duty of the office of coroner.

(To be continued.)

ON MYXOMA OF THE CHORIONIC VILLI, OR VESICULAR MOLE.

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THE practical importance of the etiology of all forms of intra-uterine death, the continued obscurity of their pathology, and the difficulty of their prevention, may possibly render the following cases, and the accompanying observations on one of the most important of these causes of embryonic destruction of some interest.

CASE I.—L. D—, æt. twenty-eight years, the mother of four children, had a miscarriage at the second month, early in December, and was admitted to St. Monica's Ward on April 15th, in a state of extreme anæmia from uterine hæmorrhage, from which she had been suffering ever since the date of the abortion. The day after admission I rapidly expanded the cervical canal with the Dilator recently exhibited by me to the Academy, so as to allow the introduction of my finger into the urine cavity, whence I removed a large mass of firmly adherent placental structure, which was found to have undergone vesicular or myxomatous degeneration. The enlarged uterus was then curetted, and subsequently brushed out with Churchill's iodine. She was put on large doses of liquor ergotæ, together with muriated tincture of iron, under the influence of which the uterus speedily regained its normal size; the hæmorrhage ceased, and within ten days she was enabled to leave the hospital.

The history of this case is very similar to that of another instance of the same disease that I met with, and to the particulars of which I may therefore very briefly refer:—

CASE II.—E. G—, æt. thirty years; married; eight children; admitted May 9th, suffering from persistent uterine hæmorrhage, which had continued since November last, when she miscarried at the seventh month. On admission she was in a state of great exhaustion, and completely blanched from loss of blood. Her pulse was 120, and so feeble as to be almost imperceptible at the wrist; and she complained of tinnitus aurium. The hæmorrhage was now a slight but incessant draining, with occasional gushes of blood on every exertion. Stimulants having been given, the uterus examined, and found to be considerably enlarged. The os was contracted, but sufficiently dilatable to allow the introduction of a faggot of sea-tangle tents; after which the vagina was securely plugged with sponge. On removing the tents next morning the cavity of the uterus was found occupied by a large hydatidinous mass attached to the fundus. The removal of this growth, which filled a small hand-basin, and of a small portion of firmly adherent placenta from which it grew, was attended by considerable hæmorrhage, which was immediately arrested, and the patient made a rapid recovery.

This case was the first instance that I met with in which a large vesicular growth was developed from a very small portion of adherent placenta continuing its abnormal vitality for several months after childbirth, and under circumstances which prevented subsequent impregnation. A fragment of the retained placenta, on examination, proved to be in a state of fatty degeneration.

Importance of the Study of Placental and Embryonic Disease.
—The history of all cases of placental disease appears to

me deserving of record, since in the comparative paucity of communications on this subject in our Transactions, we find sufficient evidence that these diseases have even yet attracted less attention than their practical importance demands. It should, perhaps, be here observed that I include vesicular mole amongst placental diseases, inasmuch, as from my own experience and observation, I can confirm the views of those who hold that in such cases the disease generally begins in the placental chorionic villi, and thence the cystic proliferations extend into the parenchyma of that structure. The obscurity of their origin, and the difficulty of diagnosis in these cases, have since the publication, many years ago, of the late Sir James Simpson's memoirs on this subject been to some extent cleared away by the papers on placental diseases of Dr. Robert Barnes in the "Medico-Chirurgical Transactions," and by those of Drs. Graily Hewitt and Braxton Hicks in the "Transactions of the London Obstetrical Society," and above all by the elaborate researches of Virchow, and by Dr. Priestley in his recent work, "On the Pathology of Intra-uterine Death." Notwithstanding all this, however, no subject of equal interest in a practical as well as in a physiological point of view remains in greater obscurity than the diseases of the placenta. It would be superfluous to dwell on the importance of this still neglected field of investigation, or to do more than observe that being, as it is, the sole medium of vital communication between the foetus *in utero* and the mother, any deviation from the normal condition of the placenta by which its development may be arrested and its physiological action impaired or perverted must be of serious consequence either to mother or to child or to both.

Various Forms of Placental Disease.—Amongst the diseases of this organ affecting the mother as well as the child are inflammations of the placenta, especially chronic or subacute placentitis, leading to morbid adhesions between the afterbirth and uterus, and occasionally giving rise to the two most serious complications of parturition—viz., *post-partum* hæmorrhage and inversion of the uterus. Another placental disease of no less importance to the mother than to the child is congestion, sometimes resulting in hæmorrhage or placental apoplexy; whilst amongst the placental diseases which chiefly affect the foetus by impairing or destroying the structural integrity of this organ are œdema, atrophy, and hypertrophy of the afterbirth, and the various forms of degeneration—fatty and calcareous; and, above all, that which was met in the cases above described—viz., vesicular or hydatidiform degeneration of the placenta. In my own practice I have now met with six cases of this disease, the comparative infrequency of which appears from the following table:—

Authority.	Labour Cases admitted into the Rotunda Hospital.	Cases of Vesicular Disease reported.
Dr. Collins.....	16,654	—
Drs. Hardy and M'Clintock	6,634	1
Drs. Sinclair and Johnston	13,748	4

Thus it appears that in 31,036 cases admitted into the Lying-in-Hospital there were only five instances of hydatidiform mole recorded, being in the proportion of 1 in 6,207 cases.

Vesicular or myomatous disease of the placenta consists in degeneration and abnormal proliferation of the placental chorionic villi, usually following, although occasionally producing, the death of the foetus. In the "Dublin Obstetrical Transactions," and elsewhere I related several cases of this kind. In most of these the vesicular mass was expelled from the uterus in the fifth month. In

some instances, however, such growths are expelled earlier, as in a case published by Dr. Moorhead, of Weymouth, in which a hydatidiform ovum was produced at about the tenth week by a woman, æt. fifty, who had not had a child for twenty years before. In other cases it may be much later, as in my second case, also in one related by the late Sir James Simpson, in both of which the patients reckoned themselves gone beyond the full time of utero gestation; and in another given by Mr. Ley, of South Molton, in which the woman was supposed by herself and by her medical attendant to have gone the full term of nine months. The symptoms of this disease can at first hardly be distinguished from those of ordinary pregnancy. If, however, in addition to the signs that usually denote the death of the foetus, the patient experiences occasional gushes of water, together with slight hæmorrhage from the uterus, lasting for a short time and recurring at irregular intervals, we may suspect the existence of myomatous disease in the placenta of a blighted foetus. The expulsion of these growths from the uterus is generally attended with severe hæmorrhage.

History of this Subject.—At a time when I had more leisure for such researches than is now at my disposal, I collected together the opinions of many of the older authorities on the character of these growths, and some few of these views may possibly seem to others, as well as to myself, of sufficient interest to warrant their brief recapitulation in this connection.

The first of these theories is that of Hippocrates, who, in the treatise "On the Airs, Waters, and Places," ascribes the occurrence of the uterine hydatids to the effect of drinking marsh and stagnant waters. Dr. Adams, in his learned commentary on the work of Hippocrates, says:—"It may appear singular that hydatids of the womb should be peculiarly prevalent in the case of women that drink unwholesome water from marshes, and yet our author's observations are confirmed by a modern authority, as quoted by Coray:—'Il a été également prouvé par les observations des modernes, que les fausses grossesses produites par les hydatids sont très-communes dans les pays marécageux ou la plupart des habitans ont une constitution lâche, propre à l'affection scorbutique qui y est presque endémique, qu'elles se terminent plus ou moins tard par l'excretion de ces hydatids.'"¹

A full account of the ancient doctrines on this subject may be found in Crooke's *Μικροσκοπία*, published in 1651. And as that work is not very commonly met with at the present day, I regret that the space at my disposal only suffices for a few lines of quotation from this very curious volume. "To perfect conception," says our author, "there is further required an *εὐκρασία* or laudable temper of the womb; for those whose wombs are either hot or cold, or moist or dry above measure, do not conceive, as saith Hippocrates. If, therefore, any of these things be wanting we cannot hope for a lawful conception, but either there will be none at all, or a depraved and vicious, such as is of the moon calf or *molla*. For Nature rather endeavoureth an imperfect and depraved conception than none at all, because she is greedy of propagation, and diligent to maintain the perpetuity of the kind of things: whereupon, rather than she will do nothing, she will endeavour anything how imperfect soever."²

¹ Hippocrates Translated, with Annotations. By Francis Adams, LL.D. Sydenham Society Edition. Vol. I., p. 197. London. 1849.

² *Μικροσκοπία*. A Description of the Body of Man, together with the Controversies and Figures thereupon belonging. By Helkiak Crooke, Doctor in Physicke, Physitian to His Majesty. Folio. London. 1651. P. 219.

One of the most interesting "Exercitationes" in "Harvey's Treatise on Generations" is that in which mention is made of this subject. Harvey observed that these substances are usually expelled in the early stage of the supposed pregnancy, and his ideas on the point appear to coincide with those of Hippocrates generally.¹

From the time of Harvey down to the early part of the present century, by the majority of obstetric authorities, all vesicular growths found in utero were regarded as identical in character and development, both the true hydatids or acephalocysts discovered in other parts of the body. And obvious as are the differences between the thin-walled aggregated vesicular masses, resembling a bunch of white currants, resulting from the cystic proliferation of the placental chorion villi of a blighted ovum, and the densely laminated separate acephalocysts, it is not a little strange that these should have been confounded together even comparatively recently, and by an observer so generally accurate as the late Dr. Blundell, with whom, a good many years ago, I had a correspondence on this question. Dr. Blundell says:—"Hydatids sometimes form in the ovum and (if I may be allowed the expression) devour it; sometimes a part only being converted into their substance, so that they lie embedded and concealed in the placental structure; sometimes the whole, or with the exception of a few vestiges being consumed, so that in place of the ovum nothing but these animalcules remains in the uterus.² It may be observed, however, in explanation of the error into which former writers thus fell, that in some few instances true hydatids have been found within the uterus. Several years since a case of this kind was published in the *Lancet* by Mr. Wilton, Surgeon to the Brighton Lying-in Institution:—"The patient was a woman aged thirty-seven, the mother of four children. She was admitted into hospital, suffering from uterine hæmorrhage and bearing-down pains. She died four days afterwards, and on examination the veins of the fundus were found varicose and congested; a large mass of hydatids was found protruding into the cavity of the uterus, and a large cluster, equal in size to a small tea-cup, was firmly adherent to the fundus. The lining membrane in the diseased part was entirely absent, and the masses of hydatids were firmly imbedded in the structure of the uterus, the vessels being dissected into layers by them. Other masses were found between the mucous membrane and the structure of the uterus, and also in the right ovary, the substance of which was thus disorganized." And, more recently, the following suggestive case bearing on this question was related by Dr. Graily Hewitt:—"A young unmarried woman died with excessive enlargement of the abdomen, and on examination it proved the peritoneal cavity was beset with true hydatid cysts, which had originated primarily in the liver. These hydatid cysts were found attached to the uterus anteriorly as well as posteriorly, to the ovaries, to walls of the pelvis—in fact, few portions of the peritoneal surface were without them. Had life been prolonged, the bursting of some of these cysts into the uterus, or into the vagina, was almost inevitable, and then the phenomena would have been presented of a young unmarried woman discharging true hydatids from the generative passages."

The first writer who maintained that all such moles are necessarily dependent on impregnation was Lamzweerde,

who, in 1685, asserted that "Virgines non possunt concipere vel generare molam sine copula maris." The same author also declares that "Vidua non potest concipere molam virtute mariti defuncti relicta in utero, sine novo maris auxilio." And the modern theory as to the origin of these growths in placental disease is a revival of the opinion of a Dutch writer of the seventeenth century (Ruysch), who says:—"Hæc recenta moles placenta, penitus amittens genuinam suam indolem, quia est vasorum sanguineorum contextus, integro suo corpore mutatur in congeriem hydatidum."¹ The same view was supported by William Hunter in his Lectures in 1785:—"I have seen," he says, "a placenta in the fourth month all degenerating into hydatids . . . the placenta and foetus being thus converted. They are generally the accompaniments, as also probably the results, of blighted and other diseased forms of eventually unproductive generation."

Modern Pathology of Vesicular Mole Pregnancy.—I need not occupy your time by any further allusion to the older doctrines on this subject, the more modern literature of which is probably already familiar to the Academy. On the latter point I shall therefore merely add that the majority of recent authorities support the views concerning the pathology of vesicular mole or, as it is now termed, myxoma of the chorionic villi, which are clearly expressed in the late Dr. Spiegelberg's "Text-book of Midwifery,"² an English version of the first volume of which has been lately published by the New Sydenham Society.

The vesicular or cystic mole, according to Spiegelberg, consists of a conglomerate of vesicles filled with pale, and for the most part clear, fluid, which are surrounded by the decidua, and in places project through it. These vary in size from a walnut to a millet seed, and are connected with each other by thin threadlike stalks.

The vesicles are degenerated chorionic villi. The degeneration consists of an abundant proliferation of the villi, and of hypertrophy of the internal mucoid matrix of the individual villus, the nuclei and cells increasing like the intercellular substance. In the fresh condition each vesicle has an epithelial covering; next to this comes the ground substance consisting of a closer tissue with small stellate cells, which are connected with the separate fibres of the tissue. The substance forming the stalks is very much like *Wharton's Jelly* and consists of a firm mucous tissue, whose fibres are arranged longitudinally and pass imperceptibly into the homogeneous layer of the vesicles. The fluid contained in the latter shows a great similarity in composition to liquor amnii, but in addition to albumen it contains comparatively much mucin.

If the vesicular mole is formed at a *very early date*, as is the rule, the whole surface of the ovum undergoes degeneration, the embryo perishes, is disintegrated and no remnant of it can be found. When the degeneration sets in after the *placenta is formed*, it is limited to the latter, although the whole surface of the ovum generally appears on superficial observation to be covered by the cysts; the foetal cavity in this case is usually very distinct, and the remnant of the embryo or even the whole (atrophied) foetus is present in it. Sometimes a simultaneous increase of the liquor amnii takes place. Degeneration of certain lobes of the placenta in the midst of healthy ones—*partial*

¹ Harvey on Generation. Exercitation the 56th, p. 420. Edition of 1653.

² Blundell's "Principles and Practice of Obstetric Medicine." Edited by Drs. Lee and Rogers, p. 250.

¹ Ruysch (Frederici)—Thesaurus Anatomicus. Pars. Secundus, Tom Primus, p. 47. Amstelodan i: 1710.

² A Text Book of Midwifery. By the late Otto Spiegelberg. Translated from the German by J. B. Murray, M.D. New Sydenham Society, London. 1887. Vol. I., p. 451.

myxoma, indeed in some places in different cotyledons, is also met with, and under such conditions no injury need result to the fœtus.

The vesicular mole with a well-developed and healthy fœtus has several times been seen. The *cause* of the hyperplasia of the villi is unknown, indeed it is undecided whether it indicates primary disease in the ovum, or to disease of the internal surface of the uterus, or is due to the maternal blood. That it is not a consequence of a very early death of the embryo, as is still often supposed, is clear, even though the villi may possibly continue to grow for some time after the death of the fœtus. Such a supposition is contradicted by the rarity of vesicular moles, compared with the much more common early death of the embryo, by this pathological growth occurring after the formation of the placenta has begun, by the fact that atrophied embryos are met with in the moles, and by the cases of partial degeneration. The death of the fœtus must therefore be looked upon as a consequence of the degeneration. The view which seeks to explain such degeneration by a morbid condition of the uterine mucous membrane (*decidua*) is supported by evidence of such disease obtained in different ways, and by the cases of partial degeneration. In those cases, however, in which no disease can be found in the uterus it becomes probable that the cause of the hyperplasia is to be sought for in an *anomalous development of the allantois*, all the more so as vesicular structures have also been observed in the umbilical cord. This view can also explain those cases of the degeneration of one twin ovum side by side with a normal second twin."

Vesicular Moles without Impregnation.—The question as to the possible occurrence of vesicular moles independently of impregnation in some instances may be one of great importance in reference to the character of the patient. On this point Dr. Priestly has expressed a very decided opinion. This question, he says, came before a Court of Inquiry in India some years ago, and involved both the character of an unmarried woman and the reputation of a medical man whose opinion had impugned her chastity. The medical man collected the opinions of all the leading obstetricians in this country, and, although the balance of opinion greatly preponderated in favour of vesicular chorion being always the result of impregnation, there was at least one notable dissentient, who believed that the vesicles might be formed in the virgin uterus. We now know so accurately the way in which these vegetations are produced that doubt should no longer exist on the matter. With our present knowledge it would be just as reasonable to suppose that a child might be expelled from an unimpregnated uterus as a true vesicular chorion.¹ For my own part, loath as I am to differ from so eminent an authority as Dr. Priestley, and although I have not met with cases of vesicular mole not accompanied by the ordinary symptoms of pregnancy, I nevertheless agree with my old friend, the late Dr. Montgomery, that even yet "our knowledge on this point is by no means sufficiently precise, nor our collection of facts sufficiently extended to warrant us in pronouncing positively on the question, or asserting decidedly in a case of suspicion that a woman was pregnant merely because she discharged hydatids from the uterus." Nor can there be any doubt that several apparently well authenticated cases that would seem to

support the contrary opinion have been recorded by authorities whose veracity is unimpeachable. Thus Dr. Samuel Ashwell, in his treatise "On the Diseases of Women," speaking of the vesicular mole of the uterus, says:—"I have seen, at least, one example where they were the result of diseased action of the uterine lining membrane, independently of sexual intercourse."

Mr. Douglas Fox, Surgeon to the Derbyshire Infirmary, also reported the particulars of a case "in which a large mass of vesicular hydatids was expelled from the uterus of a maiden lady, where the hymen was unruptured, and of whose chastity there could not be a suspicion." Somewhat similar cases have been related by Dr. Hamilton, Dr. Fischer, and other writers.

It would be useless here to refer further to this question, or to review the many theories that have been suggested in explanation of such cases at different times. For my own part, I still adhere to the views I first published many years ago on this subject—viz., first, that in the great majority of cases these growths originate in the cystic degeneration, or proliferation, of the exochorionic villi of a blighted ovum. Secondly, that cases may possibly also occur in which similar looking products are found in the uterus independently of pregnancy. Thirdly, that in the few exceptional cases of the latter kind, or, in any instance, in which the ordinary explanation does not appear admissible, their presence can only be accounted for on the supposition of their probable origin in the diseased ovary of an unimpregnated female from abnormal nutrition and perverted or monstrous development of an ovum, which thus primarily vitiated, on being expelled into the uterus, there becomes adherent, and continues to increase, until, by its bulk, expulsive action is produced.

Treatment.—In the way of treatment I know of nothing that can be done to arrest the progress of the disease, but an attempt should always be made to prevent its recurrence by improving the general health of the patient by alteratives and ferruginous tonics, especially any of the saline chalybeate waters, such as Ems, Spa, Kissingen abroad, or Tunbridge Wells and Lisdoonavarna at home.

It has been recommended that we should bring on the expulsion of these so called vesicular moles as soon as they are discovered. This, however, is clearly wrong practice: for it is quite possible that only a portion of the placenta may be affected; or, as I have seen, the birth of a healthy living child may be immediately followed by the myomatous placenta of a blighted twin conception. Hence, even if this disease could be diagnosed at any time during the periods of pregnancy, we should still let nature take her course, rather than by unnecessary interference run the risk of destroying a living fœtus which experience has shown may possibly co-exist with the vesicular growth *in utero*.

A SKETCH OF AN HYPOTHESIS TOWARDS VITO-CHEMICAL METHODS IN PATHOLOGY AND THERAPEUTICS.

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TO SEE that which actually exists, may seem an easy task, but history has shown us that the human mind "is not a dry or pure light, but drenched in the will and the affections, and the intellect forms the sciences accordingly"—(*Bacon*). It was the "Novum Organum" which, beyond all other human

¹ The Pathology of Intra-uterine Death. By Wm. O. Priestley, M.D., London, 1887. P. 112.

productions, taught man, not so much the principles of Induction, but rather the greater Method of mind, by which alone true knowledge is possible. Does the Method of Bacon help us to seize any "Prerogative Instances" in the domain of pathology, which shall conduct us to "more light?" Have we reached an elevation from which we may approach an approximative generalization in pathology and therapeutics?

It must be held as a "necessary truth" that there can be no gaps, no leaps, no "catastrophic phenomena" in nature. Putting "final causes" wholly aside, as *à priori* belonging to faith and feeling, and as being beyond our knowledge, and as having no place in the study of phenomena, we accept as an *à priori* truth, the great Idea, that all phenomena and existences are orderly and connected, and we express this Idea by the two words, Evolution and Continuity. In the Method of these Ideas and words, all disease is orderly, as orderly as is health; health and its deviations—disease—are in absolute Continuity. The same great laws or energies which make for, and are part of health, are involved in, and librate in, disease.

It would be premature in the present stage of our knowledge to attempt a classification of diseased function and structure, as parallel with or correlated with the properties of the, so-far, ultimate elements of matter, and their different molecular modes and energies; there can be little doubt, however, that function, structure, and therapeutics, will and must be brought into a parallelism and correlation with general laws belonging to the higher chemistry, and the molecular energies of matter; we have not yet grasped the infinite potentialities of molecular energy, which must play so great a part in pyrexia, in function, in growth, etc.

Although it is important to keep in view the great Form² of molecular energy, yet my present sketch will have reference to it, as shown in and through cells. Not that cells can be separated from the highest or widest energies of matter, for it is *à priori* true, that they have cosmic correlations; not the less, cells may be viewed as a temporary basis for some generalization in biology. When we contemplate a living animal as having so far commenced from the atom of protoplasm, which we call the ovum, and when we further view

¹ We use the words "ultimate elements of matter" as temporary hypothetical terms. We look forward to greater common Forms or Laws, as belonging to our present list of Elements. Whatever be the profounder nature or Forms of matter and the elements, be it energy and motion, or vortices, or whatever it be, the philosophy of the evolution of the elements, with its vast periods and fixed order, cannot be excluded from the study of Pyrexia; 98°4°, and its disturbances, cannot be separated from the cosmic Form of heat, as a mode of motion.

² The word "Form" seems much needed in modern times; the word is free from the teleological surroundings of the word "Law," and it is fuller in its scope than Plato's "Idea." Bacon says:—"Of a given nature to discover the Form, or true specific differences, or nature—engendered nature, or source of emanation . . . is the work of human knowledge."—"Nov. Org.," Book ii., aph. 1.) Again, Bacon says:—"But it is manifest that Plato in his opinion of Ideas, as one that had a wit of elevation situate as upon a cliff, did descry that forms were the true object of knowledge; but lost the real fruit of his opinion by considering of forms as absolutely abstracted from matter, and not confirmed and determined by matter."—"Ad. of Learning," Book ii., p. 355, Spedding's edition). "For though in nature nothing really exists besides individual bodies, performing pure individual acts according to a fixed law, yet in philosophy this very law, and the investigation, discovery, and explanation of it, is the foundation as well of knowledge as of operation; and it is this law, with its clauses, that I mean when speak of Forms."—"Nov. Org.," Book ii., aph. 2).

such an animal in its full growth and in its full differentiations, we must conclude that the correlations of protoplasm are cosmic: determined by environment, and by its own inherited molecular energies and motions, some of the future cells evolve in partnership with, and relation to, broad physical energies, and retain their Forms through historic, geological, and cosmic periods; and thus we have sight, hearing, touch, etc.; other cells evolve to the necessities of nutrition and food; others to the energy of procreation. Different as these cell-structures and functions appear, in their so-far final forms, none the less, no absolute line separates them—e.g., the potentialities of the protoplasm and cells, which pass to sight, from those which pass to feeling. The primitive protoplasm is receptive and correlatable to environment, is, in fact, ever evolving; the future special structure and functions of cells, in all their great variety, are therefore not absolute; the capacity for deviations is inherent in them throughout their lives, both as regards their structure and function. We thus perceive how wide must be the correlations, say, of a cancer or tubercular cell; the diseases which we call cancer and tubercle, come to be viewed as natural and orderly evolutions or reversions. But, as before remarked, we cannot view a cell as an isolated existence; all its wondrous and varied structure and functions must be inseparable from the mighty and delicate molecular actions of its contents and environment. We are thus, when studying cellular physiology or pathology, led to cosmic molecular energies. In the harmonious correlation of these infinite energies lies health, and in their disturbances lies disease. I cannot doubt that I have seen many young people, who were passing into phthisis, who have been saved by a month or two of "change of air;" nor can I doubt that cholera has often evolved from mere *change* of place, or environment of climate, or food; nor can I doubt that I have often seen varied continued Fevers, and inflammations of a "fever" type, evolve from mere "change" of environment; in these instances, the respective "changes" have modified the modes of molecular energies of cell-contents. We see here that our remedies, if apt, may be of infinite delicacy of degree, yet all-potential. I have thought it important to glance thus at cell biology, in its relation to cosmic molecular energies, in order that we may, in some degree, recognise the field in which the active processes of growth and disease take place. All disease, whether of function or structure, must be in absolute order or law; and such order or law must be in absolute Continuity with the normal rates or processes.

Must not the cell necessarily intervene in all (chemical) changes within the organic? Are there any fluids or solids in the vegetable or animal kingdoms which have not passed through the molecular stages which cells contain? Is not the cell the absolute continuity, or transitional form, from the inorganic (so-called) to the organic? In Philosophy, I suppose that we follow Kant, that Time and Space are *à priori* infinite—"The two pure forms of all intuition." I am equally constrained to believe, that what we call Matter, in its correlatable modes or energies, is infinite and eternal. Rigid science further constrains us to the belief that nothing is being created, nothing is being lost. Life itself must thus be viewed as eternal. The cell, therefore, does not *wholly* create its own functions and structure, and the special properties of its contents; on the contrary, its potentialities were latent in long preceding and different states. The cell, in fact, and indeed the whole organic

world, are as subject to, and as determined by Law, as are the crystals within the hollow of a rock.¹

Whilst we recognize the varied differentiations of structure and function of cells in a higher animal, which must have been very much determined by environment, we also must recognise that a fundamental and allied mode of molecular energy or motion, belongs to all matter which has been associated with cell-forms.

We see that "Poisons" are mostly those substances which have acquired the molecular motions of cell-evolution. It is true that such or allied molecular motions are not confined to the products of cells, for we see mercuric-chloride, arsenic, etc., act fatally on protoplasm; but in the main, what we call "poisons" are cell-contents, having some particulate molecular motion. Although the vegetable and animal kingdoms present us with an infinite variety of cells, having differences in their function and structure, yet we see that grand generic types of elementary composition pervade them all: we see also that a grand generic type of molecular motion must pervade the protoplasm of the infinitely varied forms of the organic kingdoms: and these broad biological considerations lead us to the expectation of generic types in the great variety of allied diseases—the fevers, inflammations, etc.

We must have extreme reserve how we limit the potentialities and capacities of protoplasm.² When we reflect on the history of the Method of Scientific Ideas, it appears that we cannot be far off a generalization as to a Cosmic Form or Law, which shall express the order and rates, and process of the Evolution of Life. "They who confidently and magisterially pronounce of nature, as a thing already discovered, have highly injured philosophy and the sciences, and had the success, not only to enforce a belief, but to stop further inquiry" (*Bacon*). This spirit and habit of "assertion" has prevailed in Europe, by and

¹It has been stated that we can see the formation of inorganic products, such as crystals, etc.; but that we have never seen the formation, of a cell, or other organic product. In reality, however, we do not see the inorganic process any more than the organic: we see only results. The differences in the two cases are but in the greater rapidity of one series of changes; and in the slowness of the evolution in the other series.

As in other instances, the Poet has anticipated the Man of Science in the ways of Nature:

"When Nature tries her finest touch,
Weaving her vernal wreath,
Mark ye, how close she veils her round,
Not to be traced by sight or sound,
Nor soil'd by ruder breath;
"Who ever saw the earliest rose
First open her sweet breast?
Or, when the summer sun goes down
The first soft star in evening's crown
Light up her gleaming crest?"—*Keble*.

²Mr. Bignall, M.E.S., writes to me that virgin moths (*Bombyx*) carried in boxes, in the pockets of entomologists, will, on wide commons, cause the appearance of males of the same species. How shall we estimate such waves or emissions which shall thus influence the cell-contents of the male? And on the same common, at the same moment, multitudes of varied other insects seek their own species through the senses; and yet more to complicate the problem, a thousand and one plants are sending off their waves of smell, each recognisable. And all these active processes have correlation, in absolute law of evolution and continuity, with protoplasm; which, after countless cycles of time, have reached such differentiations, as the great centres of the Ophthalmic, Nasal, and Auditory Nerves. The deviation or devolution of protoplasm, which ends in yellow fever or cholera, when these diseases follow a shock or emotion, will probably be then hardly greater, than is the change in the protoplasm of the male *Bombyx*, whether he discovers or correlates with the female.

through the Aristotelians, the School-men, and Theologians; these schools have produced the bad result of distorting the ancient and large philosophies of the East. Though the mighty light of the "Novum Organum" has been shining for three hundred years, yet the false Catastrophic Method still penetrates society, and above all, it penetrates the lay mind, in medicine. But what right have we to limit the eternal processes and order. To my mind it is an *à priori* truth, that a great Law or Form of molecular energy exists, which is ever finding its expression in cell-evolution. Such a Form of vital energy is not an entity, any more than Gravitation is an entity, but rather it is an energy with cosmic correlations, not separable from matter, and not separable from other modes of energy. None of us view all this overwhelming world of organisms as a pell-mell, but as orderly; if orderly at all, the ratio of its order and evolution must be exact; as exact as are the ratios of falling bodies—gravitation; as exact as are the ratios of the correlation of the modes of the physical energies. Therefore we are looking for a generalization, which shall express the necessary evolution of a cell, and thus be very near the expression of the order of the evolution of cosmic organic existences.

We may empirically discover how to co-ordinate the vital energy, so that Cancer or Tubercle Cells shall not appear in any structure or individual; but the mind will never rest until the Continuity of the mode of action is seen. The disturbances or reversions of the order of harmonious evolution—such as Cancer, Tubercle, etc., represent—may help us to perceive the great law of vital evolution, just as disturbances and "residual phenomena" have helped astronomers to read the further operations of the law of gravitation. From the influence of these studies, equally as from our empirical trials, our Therapeutics may become Methodical and Scientific.

I propose, then, to follow one such path—but remembering always, that such path is ever in contact with other diverging paths—commencing with the carbo-hydrates and their molecular splitting up, by the organic molecular energy of the yeast cell, which will show not only a continuity in a very large part of the field of organic existence, but also show a double parallelism with this continuity—viz., one parallel opens to our view the great likelihood of a whole series of "poisons," as evolving by fixed natural law, out of organic normal plasma; the other parallel will indicate the approximative direction of true Method in our Therapeutics.

A very wide, and so-far fundamental fact in organic chemistry and life, is what we call Fermentation. In using the word Fermentation, we are liable to see the familiar results only; but a wider and deeper view must be ever kept before us—viz., that fermentation is but part of the grand operations of the molecular energies of matter—of matter, in the so-called organic state; what we call fermentation—e.g., in the production of alcohol, is but one instance of an universal law or Form of molecular energy, ever acting in cell life, and therefore in the life of the entire organism. "The many and various reactions which take place in the organism may be viewed as true fermentations, in which the fermentable bodies are partly represented by proteids." (*Schutzenberger*, on "Fermentation," 5th ed., 1886, p. 254.)

It will, I think, be possible to make an approximative sketch of the operations of the great Form of molecular energy, as seen in its organic determinations, commencing

with the carbo-hydrates, and proceeding to the more complex carbon compounds—the Aromatic type, and also to the nitrogenous bodies; and to illustrate, approximatively, the lines of disease parallel or allied to such molecular results, and also to illustrate the molecular co-ordinations needed, to prevent the reversions and devolutions into disease.

Carbo-hydrates.—One of the great facts in organic chemistry is that of the many forms and derivatives of the alcohol series; and yet more impressive is the Continuity of all this varied series. The organic radicals of the alcohols seem capable of acting, or seem parallel in chemical law, with a great part of the range of the laws or Forms of inorganic chemistry. They can be oxidized; they form series of compound ammonias; they form caustic bases like to potash; they form organo-metallic bodies; they are related to a vast series of vegetable and animal fatty and other acids—even the cyanide series has relation to them. The alcohol radicals with N. form compounds with ammoniacal smell, which form salts with H Cl; they combine with mineral elements, such as As, Ka, P, etc. In fact, organic chemistry is very much made up of the correlations of the alcoholic compound-radicals. Nothing, in short, can more fully reveal to us the pervading nature and the continuity of the operations of a great Form of molecular energy, than do the facts of the correlations of the alcoholic compound-radicals throughout the organic domain. Such a vast range of the continuity of molecular manifestations, seems to defy any present attempt at a generalization. But we are in a position to recognize:

1. The deep continuity, and the vast variety of the series of the alcohol-radicals; and further, we recognize their place and power through a very wide range of the animal kingdom.

2. We recognize the great fact of the continuity of the complex series of the alcoholic derivatives, with the more simple types of the saccharine carbo-hydrates. The molecular motions of the saccharine carbo-hydrates are continued, though modified in form, in the vast and complex alcoholic series, just as the molecular motions and energy of an ovum or spermatozoon are continued throughout the after-life of the animal.

3. We cannot fail to recognize, that in what we call "disease," say diabetes, the highly differentiated tissues, which seem to be in continuity with the higher alcohol-radical series of bodies, tend to *revert* to their original types—viz., the saccharine carbo-hydrates.¹ Diabetes would then present itself to the mind, as the result of lost molecular energies, as a reversion or devolution of protoplasm. Reversion is seen in other states of the system: such as the smell of violets in the urine in advanced phthisis; and, in strong men, the subjects of much anxiety. Conversely, in treating diabetes, I have seen temporary good from codea; from combined arsenic, muriatic acid, and tincture of steel; and from other *changes*, effected by drugs, mineral waters, and "change of air." Such results of treatment, point to temporary restoration of the molecular modes of

protoplasm. That such benefit is not permanent, is due to the infinite complexity of the correlations of protoplasm. Our remedies do not reach the complexity of the vito-chemical reversions. The deeper molecular conditions of natural mineral waters, as they issue from their volcanic laboratories, have proved the most balancing, the most co-ordinating, against the reversion of the protoplasm, into the earlier and less complex carbo-hydrates—diabetes.

(To be continued.)

FROM GENERATION TO GENERATION: A PRELUDE TO THE STUDY OF HEREDITY.

By R. A. DOUGLAS LITHGOW, LL.D., M.R.C.P. ED., F.S.A.,
F.R.S.L., ETC.

(Continued from page 255).

Acute Infectious Diseases.—These are now generally classified as follows—viz., I. *Contagious*: including measles, scarlet fever, variola, vaccinia, typhus, diphtheria, glanders, malignant pustule, rabies, virulent ulcers and blennorrhœas, syphilis, pyæmia, puerperal fever, and erysipelas; II. *Malarial* or *Miasmatic*: including simple intermittent, remittent, and continued malarial fevers, etc.; III. *Miasmatic Contagious* diseases: as cholera, typhoid, dysentery, yellow fever, plague, influenza, hay fever, miliary and Dengue fevers, and epidemic cerebro-spinal meningitis. Are these, or any of them, subject to the influence of heredity? Before attempting to answer this question, I may be permitted to mention the now generally-believed doctrine that the acute infectious diseases are dependent for their production upon a *contagium* or *miasma vivum*; in other words, upon specific germs which have the power of reproducing themselves to an unlimited extent, the specificity of which consists in the fact that a given form or kind of disease is invariably, absolutely, and under all circumstances, due to a given kind of morbid germ, as cause or agent. We thus see that—at any rate, in the majority of the acute infectious diseases—the body remains passive to the action of germs, virus, or poison intruded from without; and that the autochthonous origin or spontaneous generation of the *contagium vivum* is no longer generally recognised or admitted. When we therefore regard the fact that any of these specific germs or poisons may so disturb the health of an infected individual as to not only cause him intense suffering, but to jeopardise his life; that after a longer or shorter time these effects may cease completely, and, beyond the life-long immunity from the influence of the same poison thus produced, the body may be otherwise unmodified, we cannot expect to find much evidence of the influence of heredity, especially as even the immunity of the individual cannot be transmitted to any great extent. Doubtless, these specific fevers, or, at least, some of them—as, for example, measles and small-pox—may occasionally aggravate a pre-existing diathesis as the tubercular or scrofulous, or may produce ephemeral dyscratic conditions of health; but as a rule, after the cessation of the specific exanthem or fever, the bodily organs and functions may remain unaffected, so that beyond the passing effects of a more or less sharp specific attack, the physical and mental condition of the individual may return to their original state. Not always, however, is even the immunity of the individual from modified, or even full-developed secondary attacks, complete, as either may recur repeatedly,

¹ We see "reversion" constantly in animals and plants, as affecting limbs, and organs, and diseases. So wide and correlated are even the most differentiated parts of an animal, that structures and diseases, may re-appear after an absence of many generations; and, further, some so-called "different diseases," yet all of one root or base, may appear in different generations. What is phthisis in one individual, may be shown as a deficient evolution of the nails, or in a highly abundant amount of hair, in other individuals of the same family; or phthisis in one sister may be amenorrhœa or indigestion in other sisters.

so that it may be safely said that no heritable condition of health is ever produced.¹

Having thus far stated the case against heredity, I may now be permitted to ask—how is it, as frequently happens, that these specific germs or poisons manifest such a selective capacity that they may attack only one or two individuals in a family, and leave the others unaffected? How frequently this happens is well known to every practitioner. While it is quite true that a low physical condition induced by intemperance, bad feeding, chronic disease, over-crowding, want of cleanliness, mental depression or fear, very often predisposes individuals to succumb to an attack of some of the acute infectious diseases, it must not be forgotten that there are individuals in most families who, owing to some constitutional peculiarities, are insusceptible of being influenced by some of them, while yet other individuals are insusceptible to the influence of other specific poisons. At the same time, it should be stated that insusceptible individuals may sometimes act as media for the dissemination of some of the exanthemata if allowed to pass from the sick-room, and to mingle with healthy persons. There is, in fact, not one of these acute infectious diseases to which many individuals are not more or less insusceptible; and I contend that where this insusceptibility has not been acquired by an attack of some of the acute infectious fevers, it must have been inherited as a constitutional peculiarity, although we cannot tell in what this peculiarity consists. In other words, some individuals are predisposed to the acute infectious fevers, whilst others are not; and as this predisposition cannot, so far as I know, be acquired—as the specific fevers are incapable of originating pathological habit by their repetition in the same individual, and therefore are incompetent to produce anything in the nature of a permanent diathetic condition—it must be inherited as a constitutional peculiarity. We thus see that while the specific fevers, in their influence upon those affected by them, leave no taint that may be transmitted, and that so far as the majority of the exanthemata are concerned, one severe attack of either of them confers an immunity (which may be life-long) from secondary attacks; yet the fact remains that in almost every family there are those who are either especially predisposed, or more or less insusceptible to their influence, and that whilst such predisposition consists in an unknown constitutional peculiarity, it is only fair to assume that it has been produced by heredity. Moreover, unless the insusceptibility has resulted from the immunity bestowed by a former attack, and has thus been acquired, it may also be regarded as a constitutional peculiarity which has been inherited.

I have said just now that one attack of an exanthem may confer an immunity from secondary attacks which may last during the life-time of the individual, but even this immunity is often seen to be neither perfect nor universal; for there is not one of the exanthemata which may not attack the same individual more than once, although a first attack so modifies those which are secondary as to render the symptoms, as a rule, much less severe, and comparatively immature. In the case of vaccination, for example, it is a well-known fact that while some persons lose its protective influence much sooner than others, there are others who are insusceptible to the vaccine virus altogether. So much for the exanthemata.

Of those acute infectious diseases which are not due to specific animal poisons I may instance erysipelas and diph-

theria, to both of which, whilst most persons are subject to their influence, some are peculiarly susceptible, and the susceptibility is such that it persists throughout life, and is unquestionably hereditary. "In both," as Mr. Hutchinson says, "that with which we have to deal is a personal and inherited peculiarity, giving proclivity when certain exciting causes are brought to bear, to peculiar forms of inflammatory action." There can be no doubt that the difference between the states of health produced by the specific poisons, and those which are due to inflammation from non-specific causes, are strongly and well marked, the latter coming under the law of intensification by habit. The same authority says: In the development of such inflammations as those of erysipelas, diphtheria, elephantiasis, and especially when not due to contagion, the constitution of the individual takes a large share, and the mere fact of their occurrence reveals his previous proclivity. The disease originates in part from without, but in part also from within. It is not an instance of intrusion, but of development, and the peculiarities of blood, tissue, or nervous system, are exactly those which are capable of increase.

It is indeed beyond question that amongst the causes of erysipelas and diphtheria family and individual susceptibility must be regarded as factors of prime importance. It would be easy to cite cases in defence of this assertion, but as the fact is too well-known to be denied, I shall content myself by the mere statement of it.

Of the remaining infectious diseases which are also purely contagious I have yet to consider glanders, malignant pustule, rabies, virulent ulcers and blennorrhœas, pyæmia, and puerperal fever; these, however, being all caused by external poisons introduced into the system, need not detain me here, as heredity can have nothing to do with them beyond the fact that the system into which they are introduced may have an inherited constitutional peculiarity which will predispose to their influence. Indeed, of this there can be no doubt, as none of them can germinate without a suitable soil, and in the case of each one of these affections, many individuals seem to be especially predisposed, while others show comparative immunity. I may now briefly sum up the results of our inquiry as to whether the acute infectious diseases are subject to heredity, and if so, to what extent. I have asserted that so far at least as the exanthemata are concerned, the mental and physical condition of affected individuals may remain unaltered, after the attack has subsided. Their tissues, however, will be so far altered as to be able in all probability to withstand a second attack of the same poison during their lives. This immunity, however, is probably seldom complete, and never universal. Thus these affections leave no taint to be transmitted. On the other hand a predisposition, or insusceptibility, is very frequently manifested by those exposed to the influence of these specific poisons, and here heredity has been a most important agent, with the exception of those cases in which a predisposition may have been acquired by repeated attacks (as in the case of erysipelas and diphtheria), or in which insusceptibility represents the immunity resulting from a first attack.

Although a chronic, and not an acute infectious disease, I may here allude to syphilis, as it is so markedly contagious; and with regard to this affection, which has been denominated the most chronic and most persisting of all specific fevers, it may be remembered that I did not include it in my classification of the diatheses, and I may now be permitted to give my reason. It may, indeed, be inferred from what I have

¹ Mr. Jonathan Hutchinson.

already said as to the non-transmissibility of any of the effects of the specific fevers, and that this holds good also in the case of syphilis, I think I shall be able to show. Diathesis has been defined as "any condition of prolonged peculiarity of health giving proclivity to definite forms of disease;" and referring this definition to syphilis, to which there is no physical proclivity, we see that syphilis is more clearly a matter of dyscrasia than of diathesis. Moreover, as in the other specific fevers, there is no actual transmission of any diathetic peculiarity, as, in the words of Mr. Hutchinson, "it is not the diathesis which results from the disease, but the *germs of the disease itself—the particulate elements of the virus—which are transmitted*." It is transference, a form of contagion rather than hereditary transmission, which occurs. . . . It is far more like contamination *in utero* than true inheritance. By contamination, in this use of the word, I mean that with sperm or germ (of either or of both parents) there passes the virus itself, the sperm or germ being itself unmodified, but simply the material medium of transference. In the case of the mother we know well that it is not necessary that the germ should have been infected at all, but that if her blood receives the virus, even so late as the eighth month, it will pass into that of the child also. Inherited syphilis, when produced under these last-mentioned circumstances, runs exactly the same course as when derived from a parental taint which existed before conception. A child, then, I assert, inherits syphilis in precisely the same sense, and in precisely the same manner, as it may inherit small-pox. It inherits not the diathesis, but the disease. The reason why the inheritance of small-pox is very rare, whilst that of syphilis is, unfortunately, common, is simply that the period during which the virus is extant in the blood is very different in the two cases. . . . My argument, if I have made it plain, has pointed to the conclusion that no minified transmission of syphilis is possible; that the child gets either nothing at all, or the germs of the disease, and that in the latter case they will, subject to the laws of idiosyncrasy, develop equally in all cases." Whilst, therefore, regarding the inheritance of syphilis as an illustration of actual transference of the germs of the disease, rather than transmission of any diathetic peculiarities, it will be thus seen that for this reason I regarded the syphilitic condition as one of dyscrasia rather than of diathesis, and I thus purposely omitted it from my classification of the latter. I therefore regard syphilis, like the other specific fevers, as incapable to any great extent of transmitting in the true sense any of its effects. It is questionable whether the syphilitic virus itself is capable of modification, and we must attribute the differences in its results in different individuals to physical peculiarities in the individuals themselves, some of which may have been acquired and others inherited.

I have now to consider a group of infectious diseases which are non-contagious, and which, depending upon *malaria* as their cause, are therefore purely miasmatic. This group includes simple intermittent and masked fevers, pernicious fevers, remittent and continued malarial fevers, and malarial cachexia or chronic malarial infection. These differ from the contagious specific fevers in the following particulars:

I. "Contagia are reproduced in and given off from the system; malaria is not."

II. "Malarial fevers are not communicable from the sick to the healthy."

III. "Malarial fevers have an intermitting indefinite course, and an irregular period of duration."

IV. "An attack of malarial fever confers no immunity from a second."¹

Inasmuch as each of these varieties of malarial infection depends upon the intrusion of a poison from without, it is not necessary for me to consider any of them in any detail. In the foregoing pages (when treating of the diatheses) I alluded to the nature of the malarial poison, and need therefore do no more than confine myself to the consideration of how far malarial affections in general are subject to the law of heredity. The diathesis due to malaria might almost be regarded as universal, as few, if any, of us may be quite exempt from its effects, however remote, inasmuch as from the earliest times the entire human family has been brought under its influence. This diathesis is also hereditary, the amount of inheritance being proportionate to the intensity and duration of the affection in the parent or ancestor. If we remember that the subject of malaria "will display through life peculiar susceptibilities," and that these effects are invariably permanent, "it is easy to see that a poison so persistent in its action and of which the effects, even in mild cases, are so well-nigh permanent, must be capable of producing that state of body which we call diathesis. The malarial diathesis is, indeed, a well-marked one, and it exists in greater or less degree in all who have ever come under the influence of its cause."² Thus in the pedigree of these malarial affections we read of their long descent, as time alone could have rendered the human race so subject to them, and, as a matter of fact, their history, of every type, reaches back to the earliest period of medical knowledge. Whilst we are all probably more or less subject to the malarial diathesis, it should not be forgotten that all are not in equal measure predisposed to the action of the malarial poison, for it is well-known that "during the endemic prevalence of malaria, only a certain number of persons are attacked by it, the majority remaining exempt, although subject to the same telluric and climatic influences;"³ and this, in all probability, is very frequently inherited. That constitutional varieties are not to be ignored as influencing the liability to malaria is proved by the fact that weak and anæmic persons are especially prone to be attacked, and, according to Griesinger, marked differences in the character of the disease may sometimes be recognised, according as it occurs in subjects of a plethoric, or of an anæmic constitution. As malaria can alone produce malarial diseases, their different forms differ relatively only in degree, the poison itself being subject to variations in quality and quantity. These affections may, therefore, be progressively arranged from the simplest to the severest forms as follows: 1. Quartan intermittent; 2. Tertian; 3. The masked intermittent; 4. Double tertian; 5. Remittent; 6. The continued; and 7. The pernicious fever; the various grades being proportioned to the intensity of the poison. But the real fact to remember is that all these varying forms are due to the effect of the malarial poison on different individuals, and that these individual differences may be either acquired or inherited, and that even when acquired many of them may be transmissible.

I may now summarise the evidence as to the influence of heredity on these malarial diseases as follows:—The real nature of the potential causative agent, malaria, is unknown: obviously, however, it is communicated to the system from without. Its effects differ in different individuals, but as they have been known to exist from the most primitive

¹ MacLagan.

² Mr. Hutchinson.

³ Hertz.

times, so they have become so inbred into the human race that comparatively few of us are totally exempt. Thus a diathesis has been developed which might almost be included with those termed "universal"—viz., the catarrhal, the rheumatic, and the scrofulous. Moreover, in addition to this racial peculiarity, many individuals are especially predisposed to the influence of malaria by heredity, and this can all the more be easily understood when we remember that each individual who has suffered from malaria has his tissues branded with it during his life; and the probability is that with the amount of diathetic peculiarity which he has—in common with most—inherited, he will also transmit a thus intensified personal predisposition to his children. Given an individual who has suffered severely from any variety of malarial disease, he must in the first instance have himself been specially predisposed before being attacked, and if the law of heredity holds good at all, it assuredly follows that, *ceteris paribus*, he may transmit this predisposition, if not the actual disease, to his offspring.

(To be continued.)

Special Articles.

HEALTH RESORTS OF THE WORLD.

XXII.—THE PEAK COUNTRY.

BY ALFRED J. H. CRESPI, WIMBORNE.

LATE EDITOR OF THE "SANITARY REVIEW."

SOME assurance is needed to write an article on a part of the country so generally known as the Peak. You cannot stand near any large bookstall, at any rate in the Midland Counties, without seeing guide books, of all prices and sizes, to that most lovely district. Buxton and Matlock do not allow Southport, North Wales, Bournemouth and Torquay to eclipse them, but insist on special attention, and struggle not unsuccessfully to hold their own in the competition with a hundred other attractive places. As for pretentious and excellent books of an exhaustive character—they are everywhere to be found in the shape of brilliant descriptive works from the pens of writers of the highest eminence—works distinguished by vigour, scholarship and anecdote—and tempting the reader to set off to the charming locality so exquisitely delineated. Among masterpieces that may be called, in a certain but unusual sense, guide books, are "Lorna Doone" and "Westward Ho," and some of Walter Scott's immortal productions, such as "Peveril of the Peak" and "The Lady of the Lake." This will present these masterpieces in a fresh light and may startle my reader. But am I not right? Is not any great work reproducing with the touch of genius the manners, local features, and history of a country, a guide book? Does it not stimulate to an effort to see the place and people? Does anyone ever read "Uncle Tom's Cabin" or "Dred" and not long to visit the Carolinas, Virginia, and New Orleans? I never read a work felicitously describing a place of great interest without longing to visit it. It is the privilege of genius to invest with living interest persons and scenes whom we have never seen and never shall see, and one of the chief delights of foreign and home travel consists in the memories that remain with us. The journey may be attended with discomfort—expense we can ill afford—disappointment even, but, after the holiday is over and the wayfarer is at home again, how lovingly his thoughts turn to the beautiful

scenes, which, perhaps, he invests with a poetic loveliness that they did not always merit. Somehow it often strikes me that I never again see a place to such advantage as the first time when my eyes fell upon its salient features. Buxton, Matlock and Lincoln I first saw in torrents of pitiless rain descending in streams, soaking boots and cloths, and most seriously increasing my discomfort; and it was not exactly pleasant to raise my head and peep, as best I could, from under my umbrella at the mighty towers of Lincoln and at the wooded heights of Matlock; but it had to be done, and I could but hope that the next visit would be under happier conditions, with bright warm sunshine and a calm atmosphere. Common report calls Italy the loveliest country under the sun, and in brilliancy of atmosphere and serenity of climate, some countries have advantages that we cannot claim, and which foreigners emphatically and scornfully deny us. And yet what can compare with a typical English village, bathed in the soft, hazy light of a summer evening? There is something so quaint and touching in all we see—the simple country folk, the lichen-covered church, the grass-grown lanes, the shady hedge-rows, and the abundant moisture preserving through the hottest weather a living verdure of which few other lands can boast—that we need scarcely envy the Apennines or long to visit the Alps.

Costly handbooks, brilliant pictures of life and manners, and chatty letters are not within the reach of every busy English father and mother, with a limited supply of ready money, a large family, and a short holiday; and a paper giving the principal features of one of our most interesting and attractive health resorts cannot fail to have its uses. My intention is to describe a locality which I know, and have three times visited, and with which I am sufficiently familiar to justify me in putting pen to paper. Chance and inclination have enabled me to get to many more places than most busy doctors contrive to visit, and as I make a point of never losing an opportunity, and not leaving anything within reach unexplored, I have contrived to see far more than would appear possible. The best rule for a tourist is to—observe; go alone if possible, if you want to see the country; then conversation does not interfere with the object that should be your sole aim. It is pleasant to have a friend or kindly host to direct your footsteps, but seldom an unmixed gain. Your host is perhaps bored; he knows everything about the place and has seen it a hundred times, so he yawns, looks weary, distracts your thoughts into other channels, and, when you look back on the brief visit from which you expected so much, you find to your surprise that you retain less than you wish. Sometimes your guide is dull and prosy, and bores you with tedious, and to you uninteresting, local matters; wears threadbare the petty disputes of people whom you have never heard about; and insists on narrating the history of the man who lives round the corner, or of the woman buried under that stone, in short he manages, often with the best intention, to fritter away the precious moments, and while fancying in his simple heart that he is increasing your pleasure, you wish him at the bottom of the sea. Go alone if you want to learn and remember; plod on in your own way, pausing here and hurrying there, making inquiries when necessary, and doing without them when disposed to trust to the light of Nature. Some people cannot observe, others cannot remember; many are incapable of carrying away impressions from places in which they are fortunate enough to stay for weeks. Trees to them are trees, and roads roads,

and nothing more, and the precious opportunities are allowed to slip away, perhaps never to return. One man learns more from a stroll along the streets of Manchester and New York, than another from a residence of ten years in those cities.

England is exceptionally rich in the inexhaustible number and variety of its pleasure and health resorts. The accommodation for visitors is usually abundant and cheap, the railway facilities great, the sanitary arrangements excellent; and people can, with rare exceptions, travel from the remotest part of the country to their destination in the course of a summer day. I can leave my house at 9.30, ten miles from Bournemouth, and be at Matlock at 4.16, at Chester at 6.0, and on the North Wales coast before the sun sinks to rest on a July day. From inland towns like Cheltenham and Birmingham, the remotest places are still easier of access. Buxton is centrally situated, and from Derby and Nottingham on the south, and Manchester, Liverpool, and Sheffield on the north, is a very short run.

Change of air for a summer holiday can be approached philosophically in another way—in its influence on the bodily health. As most people leave home not for pleasure—at least so they say—but for health, a few lines may be given to that seldom-considered subject. Dr. Marston has recently called attention to the almost universal experience of travellers that change of climate is followed by a certain well-marked disturbance of physical health, sometimes favourable, sometimes unfavourable, frequently insignificant in amount, but of which everyone is more or less sensible. On the arrival of an immigrant in a new country, whether it agrees with him or not, his organism undergoes some departure from its normal state, which diminishes till it is again in equilibrium—that is, until, by re-adjustment of the animal mechanism to the new conditions, the constitution accommodates itself to them. It is easy to follow up those great and more appreciable modifications, the outcome of which is embraced in the term acclimatisation. Individuals become acclimatised to certain diseases—yellow fever, for example—by living in the yellow fever zone, or suffering from the disease; whereas with malaria, neither residence in an ague district, nor an attack, confers immunity from subsequent inroads of the disease. In acclimatisation, it has been contended that there is adaptation to the environment; but the constitution may be more or less deteriorated by the change, and on returning to its native land, has, as it were, to reverse the process through which it has passed, and to become more robust before returning to its former state. The seasoned soldier represents the survival of the fittest; he has given proof of possessing superior physical qualities, and is as capable for service in England as before going abroad.

In prolonged residence in a tropical country like India, or the West Coast of Africa, two factors are at work—a process of adaptation to the new environment, and one of natural selection; but it may be questioned if the two can be separately studied in the same individual. The changes of bodily constitution undergone by Englishmen, removing to inter-tropical regions, may be assumed to be beneficial adaptations to altered climatic conditions—that is to say, steps towards acclimatisation. Notwithstanding these changes, the death-rate of foreigners in military occupation of a country like India, in which cholera and malaria are frequently epidemic, and which is also liable to severe outbreaks of small-pox, must always be higher than among the

corresponding classes in their own country. That portion of this excessive mortality which is not inevitable has been greatly reduced by improved habits and by the enlightened and systematic application of sanitary laws, and further improvement may be expected if immigrants will only modify their habits to meet the requirements of the locality. As regards the larger question of the acclimatisation of a race, it is asserted that none retains its highest characteristics in a country the mean temperature of which exceeds its own by 20° Fahr. When the conditions of existence, in this and other respects, are unfavourable, the natural selection and the survival of the fittest may secure the continuance of a race, but a degenerate one. No permanent colonisation of India by Englishmen has been effected, or is likely to be practicable.

Removal to Buxton or to any other health resort, implying as it does different habits, water and food, and a suspension of the ordinary occupation must be attended with some bodily disturbance, usually trifling and beneficial, but none the less real. Hence the summer holiday has a marked influence on the physical health, and should be treated as a serious matter, and turned to good account, its value can hardly be overestimated; it may ward off diseases or even cut short those that have seized upon the frame. The summer change, however, is also a source of pleasure, and regarded in that light is often the great event of the year: for months eagerly expected, and for months looked back upon with delight.

I must confess that though the South Wales Borders give me intense pleasure in fine summer weather, the unsurpassed fertility and beauty of Matlock, and of the district on to Buxton are far beyond the powers of my pen to delineate, and will compare favourably with the Wye Valley. To get out at Matlock as I did the other day, in unclouded sunshine, and stroll along Derwent Parade to Cromford, and down the leafy, rocky and lovely lanes near there, is a treat that can never be forgotten. But when one remembers that all the way up the valleys to Buxton, and far beyond that place too, the rocks, the dales, and the scenery continue of the same grand character one's delight is increased; every walk takes us through scenes of exquisite beauty, indeed it is often only necessary to turn round, or to glance in a slightly different direction to have the view completely altered: talk of getting a good view, why you get fifty good views in ten minutes in of one those Derbyshire Dales, which Eliza Cook commemorated so sweetly.

It was quite a pleasure to have a letter from my friend, Dr. Samuel Hyde, of Buxton House, asking me to stay with him as long as I liked. Alas! my visits to distant places are, like those of Angels, short and rare: certainly I did stay as long as I could, that is I reached my friend's house at noon of one day, and was far away at the same hour the next, and eight hours later was seeing a patient in a town some way off, still further from my home. Never have I seen Buxton to greater advantage than at my last visit—the verdure, the thick foliage, the brilliant sunshine, the gay throngs in the streets, and the animation in the shops made a deep impression on me.

The Romans of course knew Buxton and had baths there, as indeed they had wherever the waters were of exceptional value, and they had also a keen eye to picturesque effect, though we do not usually credit them with being lovers of nature. For many centuries baths have existed at Buxton, and Mary Stuart resided there for a time, when under the

guardianship of Lord Shrewsbury. All the way from Miller's Dale the gently waving trees, the musical ripple of the water, the precipitous rocks, and the grand timber show that the northern valleys are not less beautiful than the southern ones. On getting out at the Midland Station a single minute takes us into the heart of the town; to the left the so-called *new-town* with its fine shops, to the right the Palace Hotel vast and majestic, the Devonshire Hospital and the Crescent, and in front a bold elevation topped by the new Town Hall, and the *old-town*, which, however, Dr. Hyde tells me is not really more ancient than the new town. Among the chief features of the place are its hotels and hydropathic establishments, some so large that they would be an ornament to Manchester or Liverpool. My last visit, which had to be counted by hours, almost by minutes, was delightfully passed under the hospitable roof of my friend Dr. Samuel Hyde, of the Peak Hydropathic, of which he is resident physician, and to give my readers some idea of the life and arrangements of such a house I will describe this one, though without any intention of comparing it with others at Buxton or elsewhere. It stands on the side of the hill, and is entered through a handsome doorway; a large hall is crossed on the way to the grand staircase, which ascends by easy gradients to the top of the house; light is freely admitted by many ingenious contrivances, and the landings are remarkable for breadth and length; from the landings well-lighted corridors extend along which the bedrooms of the patients are placed. As there is sleeping accommodation for 140 patients, and 200 persons have dined in the refectory, the place seems large enough in all conscience, but Dr. Hyde assures me that during the height of the season, when the house is always crowded, the manager is sometimes obliged to send a large number of gentlemen to sleep out, and I heard hints that more bedrooms would soon be built. The drawing room is 100 feet long, and the largest in the town. It is hardly necessary to add that the warming apparatus, the electric lighting, the Turkish, vapour, spray, needle and douche baths are perfect, and I caught whispers that a thousand pounds had gone in making the lift for taking visitors to the top of the house. The household management was clearly excellent, and this was the less surprising when I saw the lady who had that department in her hands—Mrs. Macgregor; the name reveals the nationality, and need I add that if perfection in the shape of supervision is required we must go to the Scotch. I also caught the familiar but to me pleasing North British accent a good many times among the servants. Faith, imagination are always powerful factors in the cure and treatment of disease; but at the Peak Hydropathic amusement plays an important part, and the evening before my arrival the guests or patients had been having a high time, and the evening I was in the house the singing, the music and an amateur exhibition of *Tableaux Vivants*, in which some of the performers displayed qualities that would not have disgraced professional performers, showed me how much could be attempted in such a large establishment.

But I must leave the genial doctor, his amiable young wife, and the internal arrangements and close my rambling paper with some remarks on the town. Buxton is singularly clean and well built, and surrounded on three sides by handsome villas and noble terraces, some of the finest overlook the Public Gardens. The bracing air must be regarded as one of the greatest attractions of the place, and as Buxton stands from 900 to 1100 feet above sea level there is some-

thing in the atmosphere, in addition to its inland position, that must make the town totally unlike all seaside resorts.

The public baths, reputed to be among the finest in Europe, offer all that could be needed. Some of the springs are calcareous, others chalybeate; some cold, others tepid. Dr. Hyde much values the waters for their therapeutic properties, and some of his patients, I was told, took them internally as well as using them externally. Removal from home, careful dieting, and skilful medical supervision, often accomplish wonders, and though no one would claim more for the Buxton baths than for those of other places equally famous for their properties, there is no doubt that many people who are carried to the baths on their arrival, contrive before long to walk unaided. Patients flock to the town from every quarter, even from foreign lands, and 12,000 or more stay in it at one time.

A few words as to the climate. From the elevation of Buxton and its inland position, it is from 3° to 6° Fahr. colder than places in the south and south-west, and the rainfall is necessarily heavy, reaching 51 inches, and there is a good deal of cloud, while in the winter there is abundance of frost and snow. At the same time Buxton is essentially a summer resort; it makes no attempt, like Bournemouth and Ilfracombe, to attract visitors by its mild winter temperature, and the absence of a high summer temperature will, by many people, be regarded as an advantage. Corn, of course, does not grow near; but to make up for this the verdure is exquisite, and the loftiest hills are in summer green and picturesque to their very summits. People are not called upon to go to the same place year after year; this year Scarborough, the next Llandudno, and the year after Buxton can be tried, and the more variety the better, and in this way the change will have a greater effect on the system. The marked efficacy of the climate is, however, most shown in rheumatism, gout, and indigestion, in other words, in eliminating waste matters and in restoring tone to the system, and as Buxton is rapidly growing in size and popularity, it may be regarded, in spite of its antiquity, as a very decidedly rising place.

Clinical Cases.

LIVERPOOL STANLEY HOSPITAL.

URACHAL FISTULA AND ABSCESS—RECOVERY.

By MR. BARK.

I. T—, aged thirty-nine years, a bricklayer, was admitted into hospital on September 7th, 1887. About three months before this he first noticed a lump below the navel, which burst about three weeks before his admission. Had syphilis about twenty years ago, and has now iritis. Leucomatous patches on the tongue, and mucous patches in the throat. Has had much difficulty in making water for years. The patient is rather pale and emaciated, has scars over the trochanters, and altogether presents a very miserable appearance. At the lower border of the umbilicus is the opening of a fistulous passage, from which urine containing much pus exudes. Below this, a prominence appears which is distinctly fluctuating, and evidently an abscess cavity. A No. 4 French bougie passes with difficulty into the bladder, owing to a hard cartilaginous stricture at the region of the bulb. On September 30th, the patient being under chloroform, the cavity was laid open from the umbilicus almost to

the pubes, and was found to have the following boundaries: In front, the abdominal parietes, posteriorly; the anterior surface of the bladder below; and the reflection of the peritoneum from this to the anterior abdominal wall above; and was completely shut off from the peritoneal cavity. Cystotomy was then performed, in order that all urine should drain freely from the bladder. The cavity, which would contain about eight ounces of pus, was then scraped, dusted with iodoform, a drainage tube inserted, the edges brought together, both by sutures and strapping, and covered with carbolie lint and gauze. The patient did very well, the wound granulating up nicely. No rise of temperature of any moment, or other unpleasant symptoms, until November 24th, 1887, when the wound having diminished very much in size, he was allowed to sit up in an arm chair for a short time. The foolish fellow, the nurse being out of the ward, got up and did a step dance, with the result that about four feet of small intestine prolapsed through the upper end of the granulating surface into his shirt. The house surgeon having washed and returned the intestine, the abdomen was strapped, so as to firmly close the wound, and a flannel binder tightly applied. Opium was freely administered, and some brandy. The patient was not at all collapsed or anxious, merely observing, "Well, I suppose this will keep me in bed a few days longer." His temperature never rose, and his pulse was never more than 120. An enema was given him, and his bowels acted seven days after the prolapse. On November 2nd, the patient was put under chloroform, the edges of the wound pared, and an attempt made to unite them; but a few days later the stitches gave way, and left matters much the same. From that time the patient has steadily improved. The stricture gradually dilated, until at the present time No. 20 French bougie passes easily. The perineal wound has closed, all urine coming per urethram. The wound in the abdominal wall firmly healed, and the man's general appearance is altogether changed. From a wretched specimen of misery and emaciation, he is now in good condition, and fairly healthy-looking.

CEREBRAL APOPLEXY IN A CHILD TEN AND A HALF YEARS OLD.

BY JAMES EDWARDS, M.R.C.S.E., L.R.C.P.E.,

DISTRICT SURGEON TO THE LIVERPOOL LYING-IN HOSPITAL.

HÆMORRHAGE into the substance of the brain is said to be extremely rare in infancy and childhood, and when it occurs it gives rise to symptoms not unlike those produced by apoplexy in the adult. While in the adult it is due to diseased vessels, and we find the brain in a state of softening; in the child, it is often due to congestion of the brain and its membranes, the brain itself being in a healthy state. The following may therefore be of interest:—

Robert Cullen, æt. ten and a half years, awoke in early morning of February 7th, 1888, suffering from great pain in the head. He thought that he had received a blow during the night, a mistake arising probably from the sudden onset of the pain. He also complained of severe cramps in the stomach, and purging. When I saw him at eight o'clock of the same morning, I found him pulseless, and in a very prostrate condition. Administered a stimulating and sedative mixture, which relieved the pain, stopped the purging, and improved the pulse. All day he lay in a state of stupor, alternating with furious delirium. He was sick, but sucking small pieces of ice stopped it. When I visited him again at 8 p.m. he was in a deep stupor, but was easily roused. Pulse very slow, forty-eight per minute; temperature slightly above

normal. When he awoke he became very delirious and unmanageable, and wanted to go away. He complained of excruciating pain in the head; the pupils were contracted, and acted but imperfectly to light; conjunctivæ congested; there was great intolerance of light, tongue furred and dry; no abdominal pain. Gave him a bromide of potassium mixture. During the night he became very much convulsed, and towards morning the left arm and left leg became paralysed. He died about six o'clock in the morning of the 8th, having only been ill about twenty-four hours. I was unable to find any history of a blow. He never had rheumatic fever, and the heart-sounds were normal.

Post-mortem Examination.—Found in the substance of brain a dark and soft clot, about the size of an egg, bathed with serum, compressing more or less the neighbouring brain substance, and resting upon the roof of the orbits.

Reviews.

On Gonorrhœal Infection in Women. By WILLIAM SINCLAIR, M.A., M.D., late Examiner in Midwifery and Diseases of Women and Children, University of Aberdeen. London: H. K. Lewis. 8vo, pp. 143. 1888.

HALF-A-CENTURY of general practice had not prepared the writer of this notice for the disclosures of Dr. Sinclair. "Gonorrhœa as it occurs in the female sex," the author observes in his opening chapter, "is still in this country strangely neglected by general practitioner and specialist alike. . . . Yet the virus of this disorder gives rise to a group of diseases, a series of pathological conditions, which, by reason of their clinical interest and their social and moral consequences, surpass in importance any other class of affections with which the gynæcologist is called upon to deal. . . . The importance of the part played by the gonorrhœal virus in the production of disease has received comparatively little attention from the gynæcologists in England and America, whereas in some other countries, especially in Germany, in recent years, a large amount of experimental work has been done, and much clinical evidence has been collected, which must soon work a revolution in the opinions and practice of the profession throughout the world. . . . So little even of foreign work has been published in England, that it can be no exaggeration to say, that if the whole subject could be put before the practitioners of this country in all its fulness of detail, both theoretical and practical, as it has developed in Germany during the last few years, the knowledge would come as a surprise and a revelation." Dr. Sinclair further on (p. 6), states that "the gonorrhœal virus may and does frequently cause chronic discharges, metritis and endometritis, salpingitis and pyo-salpinx, ovaritis, peritonitis, derangements of menstruation, sterility, and a variety of complications and combinations of these diseased conditions; and if they can be proved, any language fails to do justice to the facts." Cases illustrative of these statements are given by the author, which are further elucidated by a reference to the researches of Noeggerath, who first enunciated the microbiotic nature of the disease, and whose investigations are embodied in the following definite conclusions:—"1. Gonorrhœa in the man, as well as in the woman, persists for the whole lifetime, in spite of apparent cure. 2. There is a latent gonorrhœa in man as well as in woman. 3. Latent gonorrhœa in the man, as well as in the woman, may evoke in a hitherto healthy individual either a latent gonorrhœa, or the symptoms of

an acute attack. 3. Latent gonorrhœa in the woman manifests itself in the course of time by perimetritis—acute, chronic, or recurring—or by ovaritis, or as a catarrh of some definite portions of the genital mucous membrane. 5. The wives of men who at any time of their lives have had gonorrhœa are, as a rule, sterile. 6. Such women, if they do become pregnant, either abort, or bear only one child. Exceptionally three or four children are born. 7. From the discharge of a woman affected with latent gonorrhœa, a fungus may be cultivated, which is exactly analogous to that obtained from the discharge of acute gonorrhœa in man." The experience of almost every practitioner, who has practised for many years, will serve to disarm or contradict much of this pessimistic view of the consequences of a single attack of gonorrhœa, but these conclusions nevertheless demand serious consideration, and should have direct influence upon practice. The discovery of the microscopic organism, the *gonococcus*, is already effecting a revolution in the theories on the pathology of gonorrhœa, which must largely influence its therapeutics. The clinical history of the disease and all its complications, its treatment and prophylaxis, are carefully elaborated and illustrated by Dr. Sinclair, whose treatise we may safely affirm will go far to fill the minds of the older class of practitioners with amazement, whilst it will, we may hope, open up more efficient protection in time to come. W. B. KESTEVEN, M.D.

Physiological and Clinical Studies. By ALEXANDER JAMES, M.D. Edinburgh: Oliver & Boyd. 1888.

THIS book consists of a number of reprints which have appeared from time to time in the medical journals, and they are well worth reprinting. They range over a variety of subjects as (1) "Tubercular Disease from the Physiological Standpoint;" (2) "Nutrition and Reproduction considered generally, and as bearing on the Etiology and Treatment of Disease;" (3) "Dilatation of the Ureters and Renal Pelves: Hydronephrosis;" (4) "The Physics of the Bladder and Ureters;" (5) "On the Tenacity of Tissue;" (6) "Transudations and Exudations;" (7) "Tendon Reflex and Clonus Phenomena;" (8) "Ankle Clonus in Relation to the Height of the Individual." The article on the physics of the bladder and ureters is an extremely valuable and interesting one, as it deals with pressure on the bladder. Dr. James endeavoured to determine: 1. Can a pressure not exceeding 2.4 in hg. burst a bladder, the exit of water per urethram being prevented? 2. What is the proportion between the amount of pressure on the one hand, and the time occupied in bursting, along with the amount of distention, on the other? The physical properties of the bladder during life are necessarily very different from those after death. Allowing for these in his experiments, Dr. James was, however, able to arrive at approximate results. "Of human bladders," he says, "I have tested twenty, but as the individuals from whom they were derived differed from one another in age, sex, and pathologically, the results obtained are very discordant. The strongest was probably that of a boy, aged thirteen years, with a head of water of six feet, it held for seventy-two hours, when the experiment was stopped, and it was then found to contain sixteen ounces of water. This bladder was afterwards caused to burst almost at once by a head of water of ten feet, the amount of water being a little over ten ounces." Rupture of the bladder is a comparatively rare occurrence, except through injuries, jumping or falls with distended bladder, yet the physiological experiments of Dr. James are none the less interesting and

important. There is also another paper on "Ankle Clonus in Relation to the Height of the Individual," in which the author concludes that, *cæteris paribus*, the rapidity of the clonus bears an inverse proportion to the height of the individual. We have mentioned these chapters more particularly, though not to the exclusion of the merits of the other papers, all of which will well repay perusal.

Surgical Applied Anatomy. By FREDK. TREVES, F.R.C.S., etc. Illustrated with sixty engravings. London: Cassell and Co. Limited.

THE present edition has been revised throughout; many sections re-written, and the book brought up to date. Having reached a third edition, it has passed almost beyond the necessity of criticism, but its merits may not be known to all our readers, so we shall again run over the various chapters and present an abstract of the contents. The work is divided into six parts, taking the different regions of the body from above downwards. Part I. deals with the head and neck. Part II., the thorax. Part III., the upper extremity. Part IV., the abdomen and pelvis. Part VI., the spine. The description of all these regions is given in clear but condensed language, and it is especially to be noted that it is up to the very latest advances. Thus, if we look at chapter iii. we shall find an excellent account of the relations of the brain to the skull, with diagrams showing the various true and provisional motor centres. At the present day when brain surgery is so prominently brought before the profession, the importance of an accurate knowledge of the topographical anatomy of this portion of the body is absolute essential to accurate diagnosis. There is another good chapter (xiii.) dealing with the abdomen, and here we are in a region in which there has been great surgical activity wherein a knowledge of anatomy is all important. The account of the intestines is taken from Mr. Treves' well-known work, "On the Intestinal Canal and Peritoneum in Man"—a work which throws a new light upon what had been considered a closed subject. This text-book is one of the best in the market.

Short Notices.

Laryngoscopy and Rhinoscopy: The Diagnosis and Treatment of Diseases of the Throat and Nose. By PROSSER JAMES, M.D. Fifth Edition. Enlarged and Illustrated with Coloured Plates. London: Baillière, Tindall, & Cox. 1888.

DR. PROSSER JAMES'S manual has now reached a fifth edition, and, brought down to recent date, it promises to maintain the position it has so long held as a useful practical guide to the examination of the throat and nose. We may mention as a proof of the recent information to be found that there is a full description of O'Dwyer's method of intubation of the larynx, about which so much has been written in America, though so little in England. A number of new drawings, plain and coloured, have been added, which also materially add to the practical value of the book. There is an excellent collection of formulæ. The book is essentially practical. It gives a full description of the methods of examination, the instruments required, etc., and the treatment. Owing to the author's power of condensation he has managed to compress into 270 pages what might have been spread over 500.

The Provincial Medical Journal,

JULY, 1888.

THE progress made during the last five years in the organisation of the Volunteer Medical Service has been such as to gratify the hearts of those who have taken an interest in this department of our Volunteer Army. The progress has been made by personal work, by enthusiasts, if we may so call them, because they have had to work, without reward; to struggle, not only against official indifference, but, worse still, against the *vis inertiae* of the men whose interests they have been advancing. The support given has not been what it should have been, but we let that pass now, in the hope that the future may bring about a change, and that when the Volunteer Medical Service have secured a definite organisation and a definite position, they may loyally support the Volunteer Medical Association, which has won for them recognition. The call will not be a heavy one. The recent deputation received by the Secretary of State for War indicates that we have now nearly reached the beginning of the end. The deputation, introduced by Colonel HOWARD VINCENT, C.B., M.P., consisted of Surgeon-Major MATTHEW BAINES, M.D.; Surgeon-Major W. R. BRUNTON, Surgeon-Commandant A. T. NORTON, Surgeon-Major MANBY, Surgeon-Major W. H. PLATT, Surgeon-Major THOS. M. DOLAN, M.D.; Surgeon J. E. SQUIRE, M.D.; Acting-Surgeon E. L. FREER, Acting-Surgeon HENRY SMITH, M.D.; Surgeon-Major WILLIAM ROBERT SMITH, M.D., Treasurer; and Surgeon ALFRED LINGARD, Hon. Secretary; with others.

Colonel HOWARD VINCENT, in introducing the deputation, said that it represented corps in all parts of the country, and he would invite Mr. STANHOPE's attention to the present condition of the Volunteer Medical Service, with a view to the appointment of a committee to consider the steps desirable to take to make it effective.

Surgeon-Commandant NORTON said that the volunteers were without any organisation in the medical department, though attempts had been made, unofficially, to bring the officers together. He would not suggest any scheme, but would ask Mr. STANHOPE to allow the appointment of a committee, upon which some Volunteer Medical Officers might be put, to report to the right honourable gentlemen, and formulate a scheme of organisation.

Surgeon-Major WILLIAM ROBERT SMITH, 3rd V.B. The West Kent Regiment, followed in a speech admirable in manner and argument, and we regret that we cannot give it in full. He concluded as follows: "If the reserve was to become anything, it must be by the aid of the volunteers. The Militia Medical Service was gradually dying out, it had now only sixty-six medical officers, and the yeomanry thirty-nine. There were over a thousand volunteer medical officers desirous of placing their services at the disposal of the country, and now that an attempt was being made to make the mobilisation of the

forces possible, they thought the present a right time to urge these matters upon the right honourable gentlemen."

Mr. STANHOPE, in reply, said that he recognised the importance of the matter which had been brought before him. He had already formed an opinion on the subject. Various anomalies and deficiencies had been pointed out, and he might say that they had been discussed by him, with his adviser, Sir THOMAS CRAWFORD, who was present, who had put forward reasons which decided him to appoint the committee suggested.

It is self-evident that if the volunteer army is necessary, then the medical service is equally necessary, and that it should be maintained in as high a state of efficiency as the militant portion of that army. The authorities at the War Office see this, and the gracious reception by the Secretary of State for War proved that the Government appreciated the work the Volunteer Medical Officers have done, and are willing to do, to aid our national defence. We want organisation, and we want a manual for the use of the Volunteer Medical Service, somewhat similar to the regulations of the Medical Department of Her MAJESTY'S Army, but suitable to our conditions of service and to our circumstances. We want definite instruction on our position and our duties. The question of ambulance supply and drill would be laid down, as to when and where ambulance work was to be carried on; when bearers should accompany battalions; what carts were necessary on route marches; what should be the position in route marches and in camp of bearers; what their duties? In Army Regulations, and in the Manual of Stretcher Drill, many of the above directions are to be found, but it would be better if we had one book, which every volunteer surgeon should possess, and which should be his *vade mecum*. What is now wanted may be briefly summed up: (1) All Volunteer Medical Officers should join the Volunteer Medical Association; (2) Suggestions as to what is required for the more effective development and efficiency of the regimental system should be addressed at once to Surgeon ALFRED LINGARD, Hon. Secretary, at the offices, 26, King William Street, Strand, London; (3) Sinews of war must be provided in the shape of the half-guinea subscription, which should be sent in at once. We may observe that the Volunteer Medical Department forms only part of a system, and that this system is not raised in antagonism to the regular army, or to encroach on the work of the regular army. The combatant officers of the Regular Service have not raised a cry that their positions are in danger owing to the recent warrants affecting the volunteer force, and we trust that we shall not hear a medical class-cry raised. The volunteer force exists for the good of the country, and not for individuals. The volunteer force must be brought to a higher degree of efficiency, and coincident with this the medical portion of it must necessarily be brought to a similar degree of efficiency.

At a meeting of the *Société Medico-Pratique*, Paris, April 23rd, 1888, Dr. ELISEE RIBARD read a paper on the subject of the treatment of burns, especially those caused by

sulphuric acid. Of late years "vitriol dramas" have been but too common on the Continent, and the cause of these tragic occurrences has been invariably jealousy. One case reads like another. A wife follows a husband, and finds him spending his time and money on a concubine in a wine shop. The outraged wife takes the law into her own hands and executes summary punishment by throwing a bottle of vitriol at the woman who has supplanted her. The bottle strikes the woman in the face and breaks, and the fluid runs into the eyes, over the face, causing horrible pain, and subsequent deformity. In one case the victim was three months in hospital, and left a deformed creature. Dr. RIBARD has devoted his attention to the best methods of treating these burns, and after many inquiries at vitriol manufactories, and personal experience, he has arrived at certain results. The dangers of sulphuric acid result from one of its remarkable properties—its affinity for water. It does not burn the tissues, in the proper sense of the word, it dehydrates them. The dangers, moreover, depend (1) on the organ injured, and its sensibility; (2) the degree of concentration of the acid; (3) the quantity; and (4) the more or less prolonged contact of the acid. All these points are admitted. The ordinary events connected with the vitriol tragedies of the streets proceed as follows: A flask of vitriol is thrown at some one in the streets, and the contents received on the face. A gendarme conducts the victim to a pharmacy. Time is often lost even over this, but if the pharmacist be at home, he treats the injuries by one of three methods, employing either alkaline solids, or olive oil, almond oil, Joseph's oil, or alkaline liquids. The theoretical idea is to neutralise the acid, the magnesia should have the property of absorbing it. In contact with the acid, the magnesia combines, and in all combinations there is heat which is injurious to the patient. Besides the magnesia being a solid body, it only acts superficially. It does not hydrate the acid. It should not then be relied upon. Treatment by the oils is in absolute contradiction of all the principles of chemistry. We read in *La Chimie Medicale*, of Wurtz, edition 1888, p. 354, "In contact with concentrated sulphuric acid, oils heat." In mixing 10 cc. of acid at 66° with 50 grammes of oil, the temperature rises to 74.5; with olive oil to 42; linseed oil to 132. To treat vitriol burns then by these agents is veritably to pour oil upon fire. The treatment by alkaline waters would be correct if they were immediately applicable, but unfortunately there is time lost in preparing them, and then they are not applied freely. There fortunately remains to us a method more convenient, more prompt, more economical, and more efficacious. It is the treatment by the liberal use of cold water; it is the method adopted in factories where vitriol accidents are common, owing to the bursting of pipes, etc. Dr. RIBARD mentions a few very striking cases of accidents occurring in a manufactory wherein the workmen had burned themselves, where the free use of cold water acted almost magically. Dr. RIBARD is at issue with many authorities, who absolutely forbid the use of cold water in the immediate treatment of burns caused by the use of chemical caustics. The method is simple, and, unfortu-

nately, we have too many burns and occasions of trying it, for the custom of throwing vitriol is spreading to England. A case is reported in the Manchester papers of a ruffian who has thrown vitriol at two women to their utter disfigurement. Cold water is nearly always accessible. One great point must, however, be kept in mind, it must be used freely. The head should be dipped into a bucket of water, or if the injury is on an arm, the hand should be submerged.

THE minutes of the General Medical Council, from Jan. to June, 1888, are now published, and may be obtained from Messrs. SPOTTISWOODE & Co., or from the Council office, 299, Oxford Street, London. The Council have done some excellent work during their sittings this year, and it is evident that the infusion of new blood has not been without notable effect on the deliberations of that body. The action of the Council in reference to unqualified practitioners has been received with satisfaction by the whole profession, and as a consequence, covering and the wholesale employment of unqualified assistants have been materially reduced. The Council have had to deal with a certain number of grave charges, and one case put before them is worthy of a passing notice. It illustrates how easy it is to make a grave charge, and how a tissue of lies may be so spun as to give a *prima facie* appearance of guilt. A man sent to the Council, in a long letter, accusing a practitioner of refusing to give a certificate, under circumstances of seeming great hardship. The practitioner was able to give a complete answer to the charge, and the complainant had to write to the Medical Council stating that the charges were totally untrue. The first letter of the complainant was dated August 22nd, 1887; the second letter was received by the Council on January 2nd, 1888; and this letter was written because the gentleman complained of put the matter into the hands of his solicitor, and thereby compelled the complainant to tell the truth. All this is detailed in the Minutes of the Executive Committee, before whom the case was brought. In this case the practitioner was put to some expense, and unfortunately, as the Council could not assist him by instituting a prosecution, he had nothing to do but put up with the loss. It shows how careful even the medical press should be in publishing *ex parte* statements wherein the characters of our professional brethren are concerned; we should wait until the full evidence is before us. The old saying here becomes true—"One side is good until another is heard."

Appendix I., published with the minutes, is a very interesting document. The sources of professional income have been of late years cut down by the hospitals, both public and private, the public dispensaries, the private dispensaries, and by the cutting of fees; but we find another source of diminution in income set forth in the fourth report of the Statistical Committee, which has been arranged evidently by the able registrar, Mr. MILLER. A census of the profession has been taken for the years 1881 and 1886, showing the movement of the profession in England. At the end of the year 1881, there were in the "Medical Register" the names of 15,022 practitioners whose registered

address was in England; at the end of the year 1886 there were 16,930, an increase of 1,908. The total area of England being 37,239,367 statute acres, each practitioner had in 1881 an average area of 2,479 acres, but in 1886 there is a decrease of 279'4 for each practitioner, the average acres being only 2,199'6. In 1881 the estimated population of England was 26,243,573; in 1886 the population was 28,135,915. Accordingly, the average number of persons to each practitioner was 1,747 in 1881, but only 1,662 in 1886, so that each practitioner had 85 patients less from whom he could make an income. The registrar tells us how the practitioners were distributed. In London, in 1881, there were 3,837 registered practitioners, in 1886 4,467; so that in 1886 the average number of persons to each practitioner was only 939, against 1,007 in 1881. In the South Eastern district, in 1881, there were 1,803, against 2,074 in 1886, the average number to each practitioner being, in 1886, 1,282, against 1,374 in 1881. In the South Midland district there were 874 in 1881, and 1,919 in 1886, giving an average of 1,841 in 1881, and of 1,849 in 1886. In the Eastern district there were 665 registered practitioners in 1881, and 696 in 1886, giving an average of 2,087 in the former year, and of 2,098 in the latter. In the South Western district there were 1,239 in 1881, and 1,341 in 1886, giving an average of 1,495 in the former year, and 1,372 in the latter. In the West Midland district there were in the year 1881, 1,432, and in the year 1886, 1,565, the average being 2,139 for 1881, and 2,065 for 1886. In the North Midland district there were in 1881, 753, in 1886, 796, giving an average of 2,240 in the former year against 2,293 in the latter. In the North Western district there were 1,793 in 1881, and 2,073 in 1886, giving an average of 2,391 for 1881 against 2,209 for 1886. In the Yorkshire district there were 1,206 in 1881, and 1,448 in 1886, an average of 2,423 for 1881 against 2,192 for 1886. In the Northern district there were 751 in 1881, and 800 in 1886, the average being 2,181 for 1881 against 2,239 for 1886. In the Welsh district there were 669 in 1881 against 751 in 1886, the average 2,369 in the former year, and 2,239 in the latter. Mr. MILLER, not content with giving an ordinary statement of these figures, has put them in tables and illustrated them with coloured charts, so has to make them more intelligible, and to bring out more strikingly to the eye the inequalities of the distribution of the profession in England. Acreage and population by themselves do not afford an exact guide as to the circumstances in which the profession are placed, the rateable value per head must be taken into account, and the Registrar has given us a mathematical problem, or rather formula, which in a measure represents, or enables us to estimate the average degree of prosperity of practitioners in a district. The formula is: $X = \frac{P \times R}{T \times t \times c}$. Where P denotes the average number of persons to each practitioner; ρ the average proportion of those on sick list; R the rateable value per head of a population; T the average time occupied in passing from one patient to another; t the average time devoted to each patient; c the average cost

or outlay connected with each patient. The factors, ρ , t , c , being indeterminable, the formula cannot be worked satisfactorily. The rateable value per head of the population for 1886 were as follows:

London	£7.24.	North Midland	£5.39.
South Eastern	£5.62.	North Western	£4.96.
South Midland	£5.29.	Yorkshire	£4.70.
Eastern	£5.37.	Northern	£5.38.
South Western	£5.10.	Welsh	£4.00.
West Midland	£4.79.		

The London district contains not less than 1,943 registered practitioners over and above its due share, but we see that it has a rateable value per head in excess of the other districts. Now this is a factor to be taken into account. The statistical paper we have just briefly run through is published in separate form from the Minutes, and may be obtained from the Registrar, at the London Office of the Medical Council. It must have cost a great amount of time in its production, and Mr. MILLER is to be congratulated upon it.

IN a speech at the Hotel Metropole, Lord RANDOLPH CHURCHILL stated that in 1877 the hospital expenditure was £201,683, and the subscriptions were £32,544. In 1887, the expenditure had grown to £247,000, whilst the annual subscriptions had only increased to £36,667. The *Lancet* states that 5,330 beds cost £546,733, and that the deficit is £45,072 in the year. The public generosity cannot, however, be tested by the subscription list: we must take into account the donations. Were it not for the latter, the London hospitals would be in much worse straits than they even now are. As a London lay contemporary truly says: "In spite of public generosity, the fact remains that the London hospitals have to meet an annual expenditure far above the amount of their incomes. The total expenditure of 1887 is said on good authority to have resulted in a deficit of £100,000; and it is that deficit, mainly, which has to be met by the annual collection made for the hospitals." The figures which have been published, showing the number of persons who have applied for and obtained hospital relief, are indeed startling. At the principal hospitals no fewer than 43,970 in-patients, and 511,914 out-patients, were treated during the past year. At the other and smaller hospitals—sixty-nine, by the way, in number—the in-patients numbered about 25,000, and the out-patients nearly 500,000. So that out of a population of four millions, somewhat like a fourth are receiving gratuitous medical relief, and are on the first step to ultimate pauperism. In view of the bankrupt state of the hospitals, a very old proposal is being revived—viz., the amalgamation of the hospitals under a central Board. This would be to imitate the system in vogue in France, and if carried to its full conception, would be to place the hospitals under State control. At the present time there is an enormous waste of money, owing to the number of secretaries, treasurers, and other officials, who have to be supported on the separate establishments of the different hospitals. At the present time there is great variation in the cost per head at the different hospitals, and

were the hospitals under a central Board, the charges would be uniform, and a considerable saving would be effected.

The subject of the state of the hospitals has been thrashed out, and we can see no solution save in the proposal of Sir RUTHERFORD ALCOCK—viz., that a Royal Commission should be appointed. "What strikes the enquirer," says Sir RUTHERFORD ALCOCK, "is the amazing waste there must be for so many separate administrations and cost of management, apart from increased cost of maintenance." And when we pass on to consider the distribution of the numerous institutions for the sick of the metropolis a stranger would be still more struck by the obvious fact that while ten of the principal and largest general hospitals are all grouped within a radius of one and a half miles from Charing Cross, giving 3,439 beds for that region, the whole of the north-east and west of the wide area of 122 square miles, with a population of millions, has only five hospitals, affording respectively 33 beds in the north, 810 in the east, and 232 in the west; 1,075 in the whole, out of a total of 4,514 in the metropolitan area, and its 4,000,000 of inhabitants. Nothing could be conceived more injurious, inadequate, or unfortunate than such a distribution for the sick poor. Under the three heads, therefore, of overcrowding in some districts, and inadequate provision in others, pauperization of the applicants for medical relief and waste of money and strength, we have summarized so many arguments of the strongest kind for inquiry and amendment. The proposal to amalgamate the hospitals under a central board would, of course, meet with strong opposition from those who have vested interest in the existing hospital system. Mr. HENRY MAUDSLY said at one of the meetings, organized under the auspices of the Social Science Association, that if the management and maintenance of these hospitals were to become an affair of State he believed that the present private subscriptions to them would be withdrawn. Again, the endowed hospitals which had been accustomed to manage their affairs their own way would certainly resist State interference. We believe that the arguments in favour of the appointment of a Royal Commission are stronger now than they ever were, and that should Government be induced to appoint that Commission nothing but good to the hospitals could thereby result.

Annotations.

"Forsan et hæc olim meminisse juvabit."

THE LATE DR. WALLACE.

"FORTY years an Irish Poor-law Dispensary Medical Officer." It is difficult to realise what a life's work these forty years represent! Forty years spent in ministering to the needs of a poor peasantry, in a scattered and wild district, always ready to start on the "red ticket," and at the dispensary to give the kind word and cheery smile which do more good than medicine—forty years of work which would weary the heart of a saint. Those who move in the higher

circles of medicine have their praises sung, but we do not hear enough of those in the humbler ranks. If ever man deserved praise it is the hard-working Irish dispensary surgeon who lives such a life as that lived by the late Dr. Wallace. Fertile in resource, self-reliant, cautious, cheerful, ready for all emergencies, able to reduce a hernia, set a fractured limb, perform an operation, the Irish dispensary surgeon unostentatiously does his work and passes away—unsung, though honoured and wept for. The late Dr. Wallace, besides possessing all the qualities of his class, was a man of rare erudition, and a genuine Christian. It is to the credit of the guardians under whom he served that, in spite of nationality and difference in creed, he was granted superannuation, and was able to retire before he went to rest. We feel Dr. Wallace's death as a personal loss. He has been a constant contributor to the *Provincial Medical Journal*, and was on its staff. His articles, written in the purest style, always commanded our attention, and we can point to his reviews as models of form and matter. They were usually short essays, full of suggestion and always noble in thought. He has gone to receive his reward, and to hear the words: "Well done, thou good and faithful servant!"

WOODHALL SPA.

IN the March number of the *Provincial Medical Journal*, we gave a full account of the intended alterations at Woodhall Spa, and we have great pleasure in stating that the new pump rooms, hotel, and baths, are now opened, and that visitors will find every comfort and luxury under the new management. Woodhall possesses a water very rare in England, and one in which, in certain diatheses, is of incalculable value—viz., bromide-iodine. The Luncheon, which took place on May 22nd, is now a matter of ancient history, though we may here briefly allude to one or two remarks made by Dr. Burney Yeo, as they cannot be too often impressed on the proprietors of our English health resorts, inland and sea-side. "The invalid does not want merely water and baths, he must be amused." English medical men, who have travelled and have seen the attractions of even the meanest of foreign watering places, will agree with those writers who condemn the apathy of those interested in British health resorts.

MEDICAL DEFENCE UNION.

THE Medical Defence Union has been thoroughly re-organised under the personal superintendence, we believe, of Mr. Lawson Tait, and we may say that it is now in a sound position. The advantages of such a union are self-apparent. Unfounded charges against medical men are of but too frequent occurrence, and as the loss entailed by such charges are very heavy, those who make them having frequently no assets, a system of insurance offers protection at a minimum of cost. The hon. secretaries are Drs. George Bateman and Leslie Phillips, Medical Institute, Birmingham, from whom all particulars may be obtained.

A PLEA FOR PHARMACEUTICAL SPECIALITIES.

DR. C. L. MITCHELL writes as follows in the *Philadelphia Medical Times* :

The outcry is made that the physician is too apt to prescribe various remedies, more or less proprietary in character, put up by large manufacturing concerns, and introduced by skilled advertising, and thus require the druggist to carry an endless variety of such articles in stock, many of which are seldom or only once called for, and thus remain a dead loss to the proprietor. But is the physician much to blame? True, he is sometimes imposed upon by the bland and suave canvasser, and the glowing printed endorsements of his professional brethren in favour of some new remedy—*vide* stenocarpine. But when he sees remedies in convenient and compact shape, of appearance much more elegant than those he can procure from the corner druggist, and of at least equal efficacy, is it to be wondered that he should prefer X, Y, or Z's manufactures to the oftentimes imperfectly-prepared remedies of the Pharmacopoeia?

And why should the druggist complain? As long as he keeps open store he must submit to the unalterable law of traffic—namely, the needs of the customer are to be supplied. He will buy Lubin's extracts for Miss Jones, and Alfred Wright's for Miss Brown. Why should he not keep Bromidia for Dr. A and Papine for Dr. B? Although he makes a great outcry about being obliged to carry so much stock, he in reality does it to a very limited extent, and, outside of a few standard preparations, shifts the burden on his wholesale druggist, and lets him carry the supply for him. Nearly all the large manufacturers have established depôts for their goods in the principal cities, and the druggist very rarely lays in a stock outside of his actual present need, unless he is sure of a steady sale. And let him remember also that if he don't keep what is called for someone else will, and his customers will be sure to go where their needs receive best attention.

And here let a word be said for that much-abused class, the modern manufacturers of pharmaceutical specialties. The medical and pharmaceutical profession owe to them a great debt. It is their industry and their capital which have developed the perfection of the coated pill and the compressed tablet, the pancreatic ferment and the pepsins, the smooth and palatable cod-liver oil emulsion and the perfected extracts of malt. To their energy we do owe the modern methods of treating disease with pre-digested and concentrated foods—a plan which has been the means of prolonging many valuable lives.

A LEFT-HANDED COMPLIMENT.

DR. H. C. BERNAYS, special correspondent of the *St. Louis Medical and Surgical Journal*, attended the German Congress for surgery. He writes to the editors as follows: "An invitation from the American Surgical Society was read. I advised all who could go over to attend, telling them *there would be a higher grade of American surgeons present (scientifically)* than were seen at the International. Esmarch told me that he would be over with his son, and was now negotiating to have some others join the party. They have very little respect for *the A. M. A. here*; but I must close, because I am expected to dine with Von Bergmann in half an hour."—(What an interesting fact to chronicle for the delectation of the St. Louis profession.)—We gathered from our American exchanges that at the Cincinnati meeting of the A. M. A. the hatchet was buried; that the scientific surgeons shook hands with the ——— surgeons, and that peace was restored. American exchanges will please note the above compliment. Dr. Bernays has the manliness to sign his name; this should pardon him much.

DR. NEALE'S MEDICAL DIGEST.

WE have been astonished at some of the criticisms on this work—astonished at the puzzle-headedness of the critics. Some have bought it, and expected with it a library. The usefulness of the work ought to be apparent. You want information on some subject—say chorea. You want a new treatment, or you think you have made some valuable discovery about chorea. You look up "Neale," and you find that your idea is old. You find a suggestion as to treatment in looking over the titles, and you find a reference. You have not all the books, but you can obtain them. At Manchester, Liverpool, Leeds, London, or through Lewis, you can loan the work referred to. But for "Neale" you might have published your *new* idea, and been laughed at. The immense labour involved in this compilation entitles it to the respect of the studious and the learned, and we venture to think that it will still more gain in popularity. It is what it professes to be—an index; it was impossible to make it any more.

THE MORTALITY OF MEDICAL MEN IN FRANCE.

M. BOUGON has been estimating the mortality of medical men in Paris. Taking medical generations according to the years in which the doctorate was obtained, he finds them represented as follows:

1833	2	1838	17	1858	56	1869	48
1841	11	1840	18	1862	29	1871	27
1850	15	1855	36	1865	64	1873	68

The oldest medical man is the venerable Gendrin, who is the last representative of the generation of 1821. The mean duration of life of a medical man practising at Paris is fifteen and a half years after obtaining the doctorate.

THE BRITISH MEDICAL ASSOCIATION.

THE fifty-sixth annual meeting will be held at Glasgow on Tuesday, Wednesday, Thursday, and Friday, August 7th, 8th, 9th, and 10th, 1888. The president-elect is Professor W. T. Gairdner, M.D., who will succeed Dr. J. Banks (Dublin). The address in Medicine will be delivered by Dr. Clifford Allbutt, F.R.S.; that in Surgery by Sir George H. B. Macleod; that on Physiology by Dr. J. G. McKendrick. The sections promise to be well supported, and the list of papers is exceptionally good. The Glasgow Exhibition is now open, and will afford recreation after the heavy work in the sections. There will be eight excursions, commencing Saturday, August 11th. 1. To Lanark and the Falls of Clyde. Those who intend to join this excursion should look up Walter Scott, and read "Old Mortality" and "The Talisman." 2. To Ayr and the Land of Burns. 3. The Perthshire Highlands. 4. To Callander and the Trossachs. 5. To Arran. 6. Stirling, Bridge of Allan, and Dunblane. 7. Rothesay and the Kyles of Bute. 8. Loch Lomond. On Wednesday, August 8th, there will be a conversation, given by the professors of the University. On the 9th a public dinner. On the 10th a reception by the Corporation of Glasgow, and on the same day a garden party given by the faculty of physicians and surgeons.

THE EXPLOITATION OF THE IMBECILES.

THE process of exploiting the imbeciles is taking place around us, and we are powerless to prevent it. England is not the only place, evidently, to which Carlisle's sarcasm might be applied. We learn from the *Australian Journal of Pharmacy*, April 20th, that Madame De Duflôt is creating a sensation at Christchurch. Needless to say, she numbers but few friends among the doctors, pharmacists, and dentists. Every afternoon she appears in her chariot on a piece of spare ground in one of the streets. A band sitting on the top of the vehicle discourses music of various quality, to the tune of which, it is said, teeth jump out, tumours fly off, short legs grow to the proper length, and the triumphant and happy cripples caper away to make firewood of their crutches. Deafness, rheumatism—in fact, diseases of all descriptions yield to Madame's magic touch. In France, according to *Le Progrès Médical*, the charlatans MM. Guillels have been gulling the enlightened peasantry of Bourgoin by selling them infusions which would cure broken legs and make noses grow on infants in need of this appendage. MM. Guillels have, however, fallen under the ban of the law, and have been fined over 1,000 francs. Our laws are made for the free, and the free appreciate them, especially that portion living on their wits. The *Electric Review* deserves the thanks of the profession for its exposures of electric humbug. Is there a public prosecutor in England?

THE PRIVY COUNCIL AND THE ROYAL COLLEGE OF SURGEONS.

THE members of the College of Surgeons demand a share in the management of their own business and property, a very rational request. The Privy Council seem, however, disposed to put the petition of the members in the waste paper basket, and to stifle the urgent demand of the members for redress of their present grievances. This is not constitutional. Before a new charter is granted, the thousands who are interested should be heard; the interests of the few should give way to the interests of the many. We trust that the members will have sufficient interest in the House of Lords or Commons as to compel a hearing of their claims for common justice.

THE MEDICAL SICK, BENEFIT, AND ASSURANCE SOCIETY.

THIS excellent society continues to flourish. At the meeting, held June 6th, after the transaction of the usual business, and the payments to sick members of £170, and an insurance claim of £200, the Chairman, Mr. Ernest Hart, made a statement as to the affairs of the society. About 130 new members had joined during the year, a number above recent averages. This indicated the continuous and steady growth of the society. They might, said Mr. Hart, soon count in the future a membership of 1,000. With reference to the reserves they might anticipate an addition to the investment of at least £7,000 in the year, and might count on a total during the end of the

current month, and close of the financial year, of £25,000, which had been, and was being, invested in the most remunerative manner consistent with principles of the highest financial security. Payments to members had been made during the year in fifteen cases of accident, totally disabling from practice, some of them of a very severe nature. One case, a doctor, who had only been insured six months, received over 100 guineas, he having sustained a compound fracture, which disabled him for several months. Several insurances had been met without any deductions as are sometimes made by insurance societies. All particulars, with prospectuses of this society, proposal forms, etc., may be obtained from Mr. J. C. Radley, Secretary, 26, Wynn road, Brixton, London, S.W.

THE SUPPRESSION OF THE STRASBURG MEDICAL SOCIETY.

FOR some political reason no doubt, the Strasburg Medical Society has been suppressed. The list of members of the society includes such names as Stoltz, Tourdes, Boechel, Strohl, Sedillot, Rigot, Michel, Koeberle, Ahmann, Hirtz, Forget, Caze, Kuss, Dagonet, Hecht, Müller, Levy—names of European celebrity. In the disturbed condition between France and Germany, we presume this really French society, established in 1842, was too French in its constitution and in its elan. It has made for itself a name while it existed, and its members, even without the society will still be able to find a platform.

MORNING SICKNESS IN THE HUSBAND.

AT a recent meeting of the Obstetrical Society of Philadelphia, Dr. Hamill stated that he had frequently noted the appearance of morning sickness in the husband after the fact that pregnancy was suspected, but the case he was about to speak of was unique, from the fact that the sickness appeared in the husband at such an early period of pregnancy. Two weeks after the appearance of menstruation for the last time, the husband had daily morning attacks, and not until it was time for the next menstruation had the woman any other evidence that conception had taken place. The husband's attacks continued for two months. During his wife's previous pregnancies he had suffered from like attacks, but not until he and his wife had both become aware of the existence of pregnancy.

LUNACY ACT AMENDMENT BILL.

THE Parliamentary Bills Committee of the British Medical Association are very carefully watching this Bill, and they have issued a circular setting forth desirable amendments in the various sections and sub-sections, and we thoroughly agree with the importance they attach to this Bill, and to the judicious nature of their recommendations.

THE DEATH OF THE EMPEROR.

AFTER suffering, borne with a heroism which commanded the sympathy and admiration of the whole civilized world, Frederick the Third has succumbed to his fatal malady.

Few cases have excited more interest in the lay and medical worlds than this one. The course of his illness has been followed from day to day with an all-absorbing interest, and the physicians and surgeons who have been in constant attendance have been also before the public gaze. Their action has been subject to public comment. Now that the end has come it would be perhaps too much to hope that all professional bickering and reprisals should cease. It is idle to speculate upon what might have been, and with the mighty dead all quarrels should cease, even out of respect for his memory. Death has revealed the exact nature of the Emperor's illness; Professor Virchow made the *post-mortem*, and Sir Morell Mackenzie has, at the request of the Emperor William, drawn up his report on this historic case. The report drawn up by Sir Morell Mackenzie, to be placed in the Royal Archives, runs as follows:—"In my opinion the disease from which the Emperor Frederick the Third died was cancer. The morbid process probably commenced in the deeper tissues, and the cartilaginous structure of the larynx became affected at a very early date. A small growth, which was present when I first examined the late Emperor, was removed by me by several intralaryngeal operations, and though all the portions taken away were submitted to Professor Virchow, he was unable to detect in them any evidence of the existence of cancer. Examinations of the sputa made at the beginning of March by Professor Waldeyer, however, led the pathologists to believe that cancer was then present. Whether the disease was originally cancerous, or assumed a malignant character some months after its first appearance, it is impossible to state. The fact that perichondritis and caries of the cartilages played an active and important part in the development of the disease no doubt largely contributed to make it impossible to form a decided opinion as to its nature till quite a recent date. (Signed) MORELL MACKENZIE."

New Remedies.

SOME important facts have recently come to light in connection with hyoscyamine. At one time hyoscyamine, atropine, and daturine were considered to be distinct alkaloids, although isomeric. It had, however, been noticed that the alkaloids met with under these names were frequently admixtures, for instance hyoscyamine has been shown to form a small part of medicinal atropine, a considerable part of daturine, and a very large proportion of light daturine. It has, moreover, been shown that the so-called duboisine obtained from *Duboisia myoporoides* is nothing more than hyoscyamine. It is now stated from the laboratory of the Chemische Fabrik auf Actien that either hyoscyamine or atropine, or a mixture of both, may be obtained from belladonna root, according to the method of extraction adopted, and especially according to the range of temperature permitted during the operation. Both alkaloids were actually prepared by M. Will from root taken from the same parcel, and their purity established by an examination of their gold compounds. Hyoscyamine obtained from the root was converted into atropine by continued heating, and by treating with alkali and by the application of various other methods. The atropine thus formed yielded a finely crystalline salt with sulphuric acid. It is considered as proven, therefore, that in good belladonna root no atropine exists pre-formed, but

only hyoscyamine, and that it is possible to obtain, by appropriate treatment, either one of these alkaloids or the other as may be desired, and that hyoscyamine is easily converted into atropine by the action of a small quantity of alkali. M. Will has also succeeded in obtaining at will either hyoscyamine or atropine from the seed of *Hyoscyamus niger*.

The herb commonly known as Shepherd's purse (*Capsella Bursa-pastores*) has lately been recommended as a styptic remedy. It has been examined by E. Bombelon. From his chemical investigation it appears that the plant contains an alkaloid, to which he has given the name of bursine; a tannin which precipitates iron salts green; and an acid named bursinic, which he regards as the active principle of the plant. It is obtained by precipitation of the fluid extract with acetate of lead. The bursinate of lead is decomposed with sulphuretted hydrogen and the solution of bursine, filtered and evaporated, and the residuum dried over sulphuric acid. It forms a pale yellow astringent and pungent mass, which reduces Fehling's solution when boiled with it. The alkaloid from its characters appears to resemble sulphocyanide of sinapine. Bombelon recommends for use in medicine a fluid extract of the plant, in doses of one or two teaspoonfuls, to stop hæmorrhage, as a substitute for ergot. It may be remarked that it has long been used as a domestic remedy for hæmorrhage; indeed, this property of the plant is indicated in "Linnæus' Materia Medica," published in 1749.

Some little interest has been excited in medical circles by the statement in a contemporary, made by a resident in Venezuela, that the juice of *Cineraria maritima* possesses marvellous properties in curing cataract. Unfortunately, the news comes at a time when, in this country at least, the plants are only obtainable as seedlings, and a month or two must elapse before experiments can be made to determine the amount of truth present in the assertion.

The reports concerning the hypnotic value of *Sulphonal* do not appear to be so encouraging as had been expected. Mr. T. E. Lovegrove, writing to the *British Medical Journal*, states that for several hours after the drug had been taken no appreciable effect could be observed in the patients, but during the greater part of the following day there was extreme drowsiness and considerable cyanosis. He found also that it required more than the stated amount of eighteen to twenty parts of boiling water to dissolve it, and immediately on cooling crystallized out, neither was it soluble in one hundred parts of water at the ordinary temperature. M. Lovegrove considers the best way of administering it is to mix it with *pulv. tragac. co.* and water. Whether or no, M. Lovegrove's experience depended upon the character of the specimen used or no seems doubtful; for it is well known that newly-introduced remedies are at first not always obtainable in a state of purity. Dr. Scholvien (*Pharm. Zeit.*, May 30, p. 320) states as his experience that sulphonal requires for solution only 15 parts of boiling water, 500 parts of water, 133 parts of ether, 65 parts of alcohol at 15° C., or 110 parts of 50 per cent. alcohol at 15° C. He found the melting point of sulphonal, after crystallization three times from alcohol, absolute alcohol, ether, chloroform and benzol, to be uniformly at 125.5° C., and thinks that this character may be taken as an indication of a pure product. Dr. Vulpius proposes as a test for its recognition the regeneration of mercaptan (of which sulphonal is a condensation product), by fusing a decigram of sulphonal with an equal weight of potassium cyanide, when a thick vapour is at once given off, having the unbearable odour of mercaptan in a high degree. Herr Ritsert prefers for the purpose, however, pyrogallol or gallic acid as a non-poisonous substitute. He heats two decigrams of sulphonal in a dry test-tube, until at about 280° C. the clear fused mass begins to give off bubbles of gas. From 0.05 to 0.1 grain of pyrogallol and gallic acid is then added, which causes the clear liquid to become brown and evolve the characteristic mercaptan vapour. A number of other disulphones have been experimented with, and Dr. Kast, who introduced sulphonal, reports that he has found one allied to sulphonal—viz., ethylen-diethylsulphone, which acts as a narcotic in the same doses as sulphonal, but probably in less time, but it appears to produce cardiac disturbance.

The other sulphones experimented with proved to be inactive, or objectionable on account of the symptoms produced.

A further contribution to the botanical history of *Curare* has been made by Professor Planchon. He had already shown that this poison was derived in the valley of the Amazon from *Strychnos Castelnoviana*; in French Guiana from *S. Crevauxii*; in the valley of the Orinoco from *S. Gubleri*; and in British Guiana from *S. toxifera*. He has now discovered that the Indians of the Orinoco prepare two kinds, one a relatively mild poison, used in the chase, and prepared from *S. Gubleri*, and another strong kind made from *Strychnos toxifera*.

Phenacetin appears to be giving more satisfaction than some of the more recently introduced antipyretics. In the *Practitioner* M. Grenfell describes several cases in detail, in which undoubted evidence was observed of its antipyretic action. The effect is perceptible about half an hour after administration. The patient generally perspires, and feels drowsy, and after sleep feels free from pain and more comfortable. Eight grains seems to be the most useful dose for an adult. M. Roe, in the *British Medical Journal*, uses it in doses varying from four to twelve grains, and finds that it has a greater and more prolonged effect upon the temperature than antipyrin, and that it has the advantage of not producing rigors, vomiting, or nausea. Dr. Koller, of Vienna, has had similar experience with the drug, except that he does not find the fall in temperature usually accompanied by perspiration, and that when it does occur, some care is requisite in exhibiting the drug.

With respect to *Sozoiodol*, it has been shown lately that there are two forms of this compound sent out into commerce. One of these, which is difficultly soluble, is the dried potassium salt of di-iod-paraphenol-sulphonic acid, whilst the easily soluble sozoiodol is the sodium salt of the same acid. The neutral potassium salt, on the other hand, is extremely soluble. The acid sodium salt requires only twelve or thirteen parts of water at the ordinary temperature, whilst the potassium salt requires fifty parts.

Antipyrin does not seem to be quite such a panacea as some of its supporters appear to imagine. Dr. Rollet, in the *Medical Press and Circular*, records his experience with it as a remedy for sea-sickness. Both he and his fellow-travellers, after a fair trial of it, came to the conclusion that it is a failure as a remedy for this distressing malady. It has also been pointed out that there is danger to patients in prescribing it together with nitrites, the products of the chemical decomposition which takes place being injurious.

Tribrom-phenol, prepared by shaking a solution of bolcaric acid with bromine water, is one of the latest introductions for antiseptic purposes. Dr. Grimm finds that gauze containing two or three per cent. of this compound, when saturated with blood serum or urine remains perfectly odourless for fourteen days, whilst a one per cent. gauze only begins to smell after five days. When a one per cent. ammoniacal solution of this drug is added to putrescent blood serum, the bacteria are stated to be destroyed in half an hour; whilst a half per cent. solution takes twice that time. A three per mille solution is said to prevent the development of putrefactive bacteria in a gelatine cultivation. *Tribrom-phenol* is prepared in the form of soft white colourless needles, melting at 95° C., and subliming undecomposed at a higher temperature. It is soluble in alcohol, ether, and chloroform, but is difficultly soluble in glycerine, carbolic acid, water, and weak alcohol. In caustic alkaline solutions it is readily soluble, and from them it is separated unaltered by acids. When given internally, it is dissolved by the alkaline secretions of the intestinal canal and eliminated in the urine as tribromophenol-sulphuric acid.

Agari-Bai is the name given to the leaves of a plant which is stated to be used successfully in South America as a remedy in catarrhal affections. The plant is as yet undetermined, but it is reported to belong to the natural order *Leguminosae*. The leaves are described as being dotted with oil glands, and having an odour resembling fœnugreek, and an aromatic bitter taste.

The leaflets are ovate, coarsely serrate, about eight millimetres broad, and 1.5 centimetres long.

Periscope.

I.—GLEANINGS IN MEDICINE.

BY W. B. KESTEVEN, M.D.

On Primary Actinomycosis of the Brain in Man (*Centralblatt für Chirurgie*, April 7th, 1888).—Professor Bollinger relates the first recorded case of Actinomycotic tumour of the brain. The patient, a woman aged twenty-six, had, in consequence of the bad state of her teeth, fed for several months on raw meat and unboiled goat's and cow's milk. In February, 1886, was attacked with frequent vomiting; this was followed by paralysis of the right Abducens muscle. The paralysis extended, and was accompanied with squinting. Several paroxysms of headache then occurred at uncertain intervals, attended with loss of consciousness, and she became comatose. After death it was found that a tumour of the size of a common nut existed in the choroid plexus, encroaching upon the third ventricle. The tumour contained a gelatinous fluid with granulation cells, and colonies of Actinomycetes. Professor Bollinger had given the diagnosis of cerebral tumour.

Tubage of the Larynx (*Centralblatt für Chirurgie*, April 21st).—C. Storck. The author, without discussing the availability of tubage, directs his attention to perfecting the method of the operation. The tube which he employed is of about four centimetres in length, having at its upper end a rim, which rests on the vocal cords, and extends on each side into the ventricle of Morgagni, while the lower portion is passed deeply into the trachea. The tube is inserted with a peculiarly constructed forceps. This fixes the tube, and at the same time removes a plug, which during its introduction extends beyond its lower end. The plug is perforated throughout, so as to admit the passage of air during its introduction. The tube lies in the larynx without causing any inconvenience, or interfering with deglutition. Under ordinary circumstances the tube would be coughed up, or cause choking. A silk cord is attached to the tube by which it may be withdrawn.

Tubage of the Larynx (*L'Union Médicale*, May 1st, 1888).—At a sitting of the Société Médicale des Hospitiaux, M. d'Heilly briefly traced the history of this operation. Proposed in 1853 by M. Bouchut, rejected by Trousseau, forgotten until 1888, when it was resumed by O'Dwyer, of New York, who succeeded in having it adopted by his confrères, and, added M. d'Heilly, exhibited a mean success of 26 per cent. out of a total of 2,519 cases in the United States of America—a result superior to that of tracheotomy. M. d'Heilly had operated, with O'Dwyer's instrument, in thirteen cases of croup under the same conditions as tracheotomy would have been performed. The age of the youngest subject was nineteen months; of the eldest, four years. Two were at the last extremity, and died. In the remaining eleven the tube remained *in situ* six or seven days. The advantages of tubage are the facility of its accomplishment, its bloodlessness, and safety from accidents to which tracheotomy, even in the hands of the most skilful, is obnoxious. The canula being well supported, the relief is instantaneous. The obstruction of the tube by false membrane is an inconvenience to be guarded against, by the speedy removal and instantaneous replacement of the tube. The principal inconvenience, however, is experienced in deglutition, especially of fluids and the possible escape of portions of food into the air tubes with risk of production of broncho-pneumonia. This risk may be obviated by tube-feeding from the first, through the nostrils.

Cathereterism of the Ureters in Man. By Axel Iversen, Copenhagen (*Centralblatt für Chirurgie*, April 21st, 1888).—In the ordinary surgical treatment of disease of the kidneys it is almost impossible to be sure of the condition of both of the organs; direct catheterism of the ureters alone allows of a correct conclusion. By the use of Nitze's Cystoscope the orifices of the ureters may be brought into view, and catheterism thereof permitted. Herr Iversen relates the case of a man thirty-eight years of age, who came under his care with symptoms of pyelitis, but whether double or single could not be determined. The microscope showed constant presence of pus cells and, on one occasion, a hyaline cylinder. The patient was feverish, and notwithstanding general treatment, did not improve. The high operation after Guyon was performed, and by the help of electric light both ureters were catheterised. A clear fluid flowed at intervals from the right ureter, while from the left ureter there was a continuous stream of pus, with so much impetus that it was evidently under pressure. The urine was examined with the microscope. That from the right ureter exhibited blood globules, epithelial cells, and a few casts. The urine from the left kidney contained only pus. The operation was successful, the wound healed quickly, and the urine passed normally. The condition of the patient remained the same as before the operation, but having

regard to the desquamative process in the right kidney, the operation of nephrotomy would have offered no advantage to the patient, and would have been attended with danger. Herr Iversen records this case as illustrating the advantage of catheterism of the ureters, and as a warrant for its employment on any future occasion.

Staining of Actinomycetæ (*Centralblatt für Chirurgie*, No. 16; from *Deutsche Med. Wochenschrift*, 1887, No. 49).—Picro-carmin is stated to be the most efficient agent for the staining of actinomycetæ. A small portion of the fluid from the tumour, or of the pus, is spread in the thinnest possible layer on a glass cover, and allowed to dry in the air. The preparation is then to be passed three times through the flame of a spirit lamp, and laid upon the carmine solution. In about three minutes the staining will be completed, and may then be examined under water or glycerine. The fungus will exhibit various shades of yellow, while the other tissues will present the red colour. Sections from fresh, as well as from hardened preparations, may be treated in the same manner.

Arborescent Lipoma of Sheaths of Tendons. By Dr. Heinrich Hæckel, Jena (*Centralblatt für Chirurgie*, April 28th, 1888).—Dr. Hæckel relates the case of a joiner, who, for several years, suffered so severely from tumours of the joints of the fingers, that he was unable to follow his trade. Microscopical examination of the tumours showed them to consist of lipomata. A review of the literature of this somewhat rare affection shows it to belong to early life, and to hand-workmen such as joiners, coopers, etc. It occurs generally on the joints in the hand, but in one case it was met with on the foot. It was observed, in one instance, as a sequence of chronic rheumatism. In some cases the tumours occur symmetrically on the two sides of the body.

Ligature of the Internal Jugular and Carotid (*Gazette Hebdomadaire des Sciences Médicales*, May 13th, 1881).—M. Perier successfully tied these vessels in the case of a man who received the thrust of a sword-blade which had become impacted, and broken short off, in the vertebral column, on the level of the integuments. Profuse hæmorrhage was arrested by the prompt action of M. Perier, and life was saved by ligature of the vessels above and below the punctures.

Hydrophobia (*Gazette Hebdomadaire des Sciences Médicales*, May 13th, 1888).—Dr. Peyraud, Vichy, considers that he has succeeded in extracting, in a liquid form, the poison of rabies from the brains of rabid animals. This liquid, Dr. Peyraud asserts, acts as a veritable protective vaccine against rabies. It remains to be seen whether other investigations confirm the opinion of Dr. Peyraud.

Intra-pleural Injections of Air (*Gazette Hebdomadaire des Sciences Médicales* de Bordeaux, May 13th, 1888).—M. Posaid submitted to the Academy of Medicine the following conclusions of his researches:—1. It is possible to completely evacuate pleuritic effusions in connection with pneumo-thorax, and to substitute sterilised air. 2. Air, if completely cleared from germs by filtration through wadding, is free from noxious action. 3. This means precludes the danger of a large accumulation of fluid, or of its sudden evacuation. 4. It supersedes the necessity for repeated punctures, and permits a slow and progressive expansion of the lungs. 5. By leaving the lung a long time at rest the healing of tubercular lesions is favoured. M. Posaid removes the fluid by means of his aspirator, and admits the sterilised air through the wadding, under carefully regulated pressure, from a flask containing phenic acid.

A Remedy for Warts (*L'Union Médicale*, May 3rd).—Perchloride of Mercury, 1 part; Glycerine, 30 parts. To be carefully painted on the wart daily. This is said to be more effectual than previous remedies.

Accidents occurring after Vaccination by Animal Lymph in Germany (*L'Union Médicale*, April 28th, 1888).—Many instances of serious cutaneous disease, occurring after vaccination by animal lymph, are reported from various parts of Germany. The following instance affords an example:—On the 20th June, 1887, twenty infants and fifteen elder children were vaccinated with animal lymph. In the majority of the cases a vesicle containing clear fluid appeared on the second day. The vesicle enlarged, and became ruptured. On the seventh day the arm presented an excoriated surface, with a red zone; desiccation took place later on, leaving more or less deep red stains on the skin. Between the eleventh and fourteenth days after vaccination, fever appeared. The vaccination spots became vesicles, then pustules. The eruption appeared also on other parts of the body, about the nose, lips, hair, and on the hands and feet. The pustules were isolated, and became covered with a crust, which falling off, left depressed red spots. Other cutaneous diseases, such as impetigo, ecthyma, assuming a contagious character, also made their appearance. The number attacked was considerable; four deaths occurred, but their causes are not medically attested.

Has Cancer its Origin in Microbes? (*L'Union Médicale*, May 5th, 1888).—This is a question that has been propounded for several years, and has received from many observers replies, both negative and affirmative. The difference of opinion may probably be explained by the circumstance that they are not found in all phases of the disease, and perhaps that certain conditions are required to allow of their penetration and proliferation in the tumours. Dr. Nepven has instituted researches in the laboratory of La Pitié, and is of opinion that the microbes find their way by solutions of continuity, ulcers, or wounds of the integuments, or produce tumours by their local irritation.

Case of Ectocardia, and its Cure by Autoplasmy. By Professor Lannolougue, of Paris (*Gazette Hebdomadaire des Sciences Médicales*, March, 1888).—On the 15th February, an infant, aged six days, was received into the *Hôpital Trousseau*, presenting a circular opening of about the size of a franc-piece, in the centre of its sternum. In other respects the child was well made. The aperture was closed by a membrane, which in a day or two afterwards gave way and exposed the heart, which could then be felt to harden in its contractions. The inner ends of the clavicles were articulated with the first rib, leaving a deficiency of about three centimetres at the upper end of the sternum, which was divided to some extent, until the two halves united to form the xiphoid cartilage. The space between the two halves became depressed on inspiration, and elevated on expiration. A flap of integument from each side of the fissure was brought over it and united by hair sutures. Only a few drops of blood were lost. In fifteen days the incisions were completely healed, only a linear cicatrix being visible.

[The case as given in the above-named journal is illustrated by drawings, for which we have not space.]

Sulfonal: a New Hypnotic (*Fortschritte der Medicin*, May 15th, 1888).—Under the above designation a new hypnotic is introduced in medicine. It is produced from the oxidation of a combination of ethermylecaptan with acetone. It crystallises in colourless flakes; is soluble in twenty parts of boiling water, but requires 100 for its solution in cold water. It is readily soluble in alcohol and ether. In most cases it causes a feeling of lassitude, followed shortly by a deep sleep. It has been tried in several hundred instances, and produced sleep in from half an hour to two hours, lasting from five to eight hours. It is reported to act more certainly than aldehyde, and to be more uniform in its operation than chloral.

II.—NOTES FROM RUSSIAN, POLISH, AND BULGARIAN JOURNALS.

By VALERIUS IDELSON, M.D., BERNE.

Myoplastics for Congenital Wry Neck.—At a meeting of the St. Petersburg German Medical Society (*Verein St. Petersburger Aerzte*), Dr. A. I. Schmitz showed (*St. Petersburger Medizinische Wochenschrift*, No. 6, 1888, p. 55) a boy, aged five, in whom, a month before, he had performed an ingenious myoplastic operation for correcting a severe left-sided torticollis of congenital origin. As is known (see Professor R. Volkmann's paper in the *Centralblatt für Chirurgie*, No. 14, 1885), the usual subcutaneous tenotomy of the sternal and clavicular attachments of the sterno-cleido-mastoid muscle not unfrequently fails to secure a satisfactory correction of wry neck. Similarly, a transverse myotomy of the said muscle sometimes proves but partly successful, in consequence of the development of a voluminous cicatricial tissue, whose subsequent contraction spoils the primary effect of the operation. Besides, the method requires a prolonged orthopædic after-treatment with extension and apparatuses. Starting from these considerations, Dr. Schmitz decided to give a trial to the plan as follows:—Having exposed the affected muscular belly by a longitudinal incision, and pushed aside the external jugular vein, he made (a) a transverse incision through the median half of the muscle, at the level of the angle of the lower jaw; (b) another transverse incision, three centimetres below the former, through the lateral moiety of the muscle; and (c) a longitudinal one, connecting the previous two incisions. The two muscular flaps formed by that "stair-like (*treppenartig*)" incision—a median one, with its basis looking downwards; and a lateral one, with its basis directed upwards—were then stitched together with catgut in such a way that the length of the sterno-cleido-mastoid muscle increased about three centimetres. An immobilising (plaster-of-Paris) bandage was at once applied to keep the boy's head in the corrected situation for eleven days. On removal of the dressing, the wound was found healed *per primam*. The orthopædic after-treatment consisted only in light passive and active gymnastics, without any apparatus. Not a trace of the former high deformity remains at present, all movements of the patient's head and neck being quite normal.

Amputation of Mamma for Recurrent Cancer.—In the Bulgarian periodical, named *Meditsinsko Spisanie* (No. 1, 1888, p. 8), Dr. Ivanoff details the case of a cachectic, much-exhausted Turkish woman, aged seventy-two, who was admitted to the Varna Town Hospital on account of malignant disease of her right mamma. About two years before she had been operated upon at the same hospital for cancer of the same breast. The disease soon reappeared after her discharge, to gradually assume the size of a new-born infant's head. The tumour had an irregularly ovoid shape and uneven surface, was hard at some spots, soft and fluctuating at others; the skin over it was partly livid and adherent, partly of a normal colour and freely movable. There was seen, in the centre of the swelling, a large drawn-in scar, left by the previous operation. The patient having been brought under the influence of chloroform, an elliptic incision was made, and the new growth dissected down to the pectoral muscles, to be extirpated as a whole. The operation (conducted with all antiseptic precautions) lasted one hour, bleeding being fairly profuse. There was a considerable prostration for the two or three next days. On the second day the dressing was found soaked in blood, the source being a couple of wounded small arteries, which were at once ligatured. In spite of a persistent diarrhoea, the wound (which was dressed antiseptically every three or four days) healed kindly without any trace of suppuration, the temperature only once (on the second day) rising up to 38°C. The last sutures were removed on the fourteenth day. The woman left quite well on the fifty-third day. The tumour weighed one kilogramme, and was found to contain numberless cysts, partly isolated, partly communicating one with another. Some of the cysts were filled up with a serous, and some with dark sanguinolent, fluid.

Herniotomy for Incarcerated Crural Hernia.—In the Bulgarian *Meditsinsko Spisanie*, No. 1, 1888, p. 9, Dr. Ivanoff describes the case of a Turkish woman of forty-five, who was admitted to the Varna Town Hospital, complaining of constipation of twelve days' duration, vomiting, and general weakness. There was present an irreducible crural rupture on the left side, which had appeared a twelvemonth before from her having lifted up a heavy kettle. Since any urgent symptoms were absent, Dr. Ivanoff went on, for four days, with treating the woman by purgatives, enemata, taxis, hot baths, etc. Everything having utterly failed, he at last resorted to herniotomy, which "was performed without chloroform, since the woman proved to be very courageous and patient, and even did not ask him for any narcotisation." [All the same, one cannot help thinking Dr. Ivanoff's behaviour quite incorrect and utterly cruel. One might yet admire him, if he would operate upon himself without any "pain-killing" means. But when he ventures to wantonly torture his patients in that way, he displays *eo ipso* only that, on one side, he is generally rather callous in regard to human suffering, and, on the other side, that he is free from anything like clear notions in regard both to the very essence of the medical art, and to the historical evolution of the medical thought. The essence of the art of healing is humanism itself in the best, highest, and widest sense of the word, since the ideal aim of the art is a complete relief and prevention of human suffering of every kind and description. And towards this ideal the medical thought has been advancing from century to century, ever striving to mitigate human suffering ever more completely, more extensively, and more perfectly, which implies, amongst other things, a progressive "humanisation" of our intrinsically-humane art itself—that is, a thorough improvement of our ways and means for relief of suffering in the sense of possibly diminishing any pain and discomfort, any unpleasant sensations which might arise for the patient from our remedial measures. To free every sufferer from all his sufferings, without inflicting any "trace of a shadow" (to use Lord Randolph Churchill's vocabulary) of any additional pain or discomfort; to make every patient quite comfortable from the beginning to the end of the case, at any price—this is the imperative debt of every modern scientific and conscientious practitioner. It is a matter for great regret that the teachers and trainers of young generations of practitioners as yet somehow neglect to impress this holy debt sufficiently deeply into the young minds and hearts. Hence cruel methods of treatment continue to be wantonly practised all over the civilised world, notwithstanding that the medical science has already armed the practitioner with humane weapons for struggling against diseases, and in spite of our possessing such lucid and powerful expositions of the matter under consideration, as those, for instance, of the great George William Callender, whose works might be very usefully studied by our Bulgarian confrère. By the way, it is hardly a blind, accidental coincidence that a Callender happens to belong to the same race which has given mankind some of the greatest "humanisers" of the medical art, such as the "ether Morton," and the "chloroform Simpson," and the "ether spray Richardson," etc. Possibly, after all, it will be the British element of the international thought which will create an universal humane medical art, as it has created an antiseptic one.—*Reporter*.]

A vertical incision, about seven or eight centimetres long, was made across the swelling and through the hernial sac, which proved to contain a portion of the omentum and a knuckle of the small bowel. The reduction could be effected only after the author "had enlarged the crural orifice upwards, outwards, and inwards." Having ligatured the neck of the sac with catgut, he excised the sac with scissors, to close the wound and to apply an antiseptic dressing. The operation lasted one hour and a half, and was followed by a series of stools, which on the next day assumed a diarrhoeic character. On the sixth day the wound was found suppurating, while just above the Poupart's ligament there was present an oblong, hard, and tender swelling, which circumstance induced Dr. Ivanoff "to remove a suture, to open the wound, and to wash it out." On the seventh day the induration became still larger and more painful; hence, another suture was withdrawn, and a drainage tube introduced. Up to the twenty-eighth day the woman had localised pain, headache, diarrhoea, mild fever (up to 58.8°C.), and was rather weak. But later on a steady general improvement set in. The wound was found closed about the forty-seventh day. A few days later the patient left quite well.

On Morbid Changes in Arteries in Pulmonary Phthisis.—Professor V. A. Manassein has already, many years ago, pointed to a distinct rigidity of arteries, constantly present in young (as well as in older) patients suffering from pulmonary phthisis. Following his suggestion, Dr. Nikolai S. Ippa, of St. Petersburg, has recently undertaken a long series of laborious microscopical researches, in order to throw some light on this important and interesting, though still pretty much neglected, subject. In a preliminary note in the *Vratch*, No. 20, 1888, p. 384, Dr. Ippa says that the material for his investigations (conducted under the guidance of Professor K. N. Vinogradoff) consisted in the brachial, radial, cubital, femoral, popliteal, anterior tibial, common carotid, temporal, cardiac coronary, pulmonary, splenic, and basiliary arteries, and the aortic arch, thoracic ascendant and abdominal aortas, taken from ten patients, aged from fifteen to thirty, who had died from pulmonary phthisis, and who had never suffered either from alcoholism, or syphilis and rheumatism. The results arrived at by the author may be given thus: (1) In every one and all of the cases examined there were found more or less pronounced morbid alterations of a kind common to all. (2) The arteries proved to be affected with those morbid processes which are described under the name of "chronic fibroid endarteritis." (3) In such blood-vessels whose intima does not contain any connective tissue under normal conditions (such as the brachial, radial, cubital, femoral, popliteal, anterior tibial, temporal, cardiac coronary arteries—vide Dr. Westphalen's *Dorpat Inaugural Dissertation*, 1886; Professor R. Thoma's researches in *Virchow's Archiv*, vol. xciii.; and Dr. E. Sack's *Dorpat Inaugural Dissertation*, 1887) there was found a newly-formed connective tissue. (4) In such arteries whose intima contains a connective tissue layer under healthy conditions (such as the aortic arch, thoracic and abdominal aorta, carotids, splenic arteries, etc.), the stratum was found to have an undue, a too mighty development. (5) The mightiest changes of the kind were met invariably in the cardiac coronary arteries. (6) The slightest alterations were always observed in the central portion of the brachial artery, as well as in the aortic arch and femoral artery. (7) The intima of the basiliary and pulmonary arteries was found to be invariably intact. (8) The middle coat of arteries presented atrophy of its muscular elements and proliferation of the connective tissue ones, the change being invariably localised correspondingly to those in the intima. "The alterations in both of the arterial coats proceed always *pari passu*." (9) It is not impossible that endarteritis in phthisical subjects results from a failure of vascular tone (according to Thoma's mechanical theory of this vascular affection in general), which failure, in its turn, is caused by malnutrition of the middle coat of arteries, connected with a general disturbance of the patient's nutrition. However, the question, whether the arterial changes described represent only a secondary phenomenon, or, on the contrary, are of a primary nature (and then play the part of a predisposing cause for the pulmonary disease—for instance, in hereditary cases of the latter), can be settled solely on the ground of a comparative examination of arteries in (1) such persons who die from various exhausting diseases of a non-phthisical nature; and (2) in such subjects who, while presenting the so-called *habitus phthisicus* (as admitted in offsprings of phthisical families), happen to die from some accidental disease or injury, before the development in them of any phthisical symptoms.

Intra-Pulmonary Injection of Creosote in Pulmonary Phthisis.—In the Polish *Przegląd Lekarski* (February 4th and 11th, 1888), Dr. L. Rosenbusch, of Lvov, in Galicia (Austria), relates nine cases of pulmonary tuberculosis, which he treated by the intra-pulmonary injection of a "vegetable creosote (*creosotum e bitumine fagi*)," in a 3 per cent. solution (in oil of almonds). A half-syringeful (Pravaz), or 0.015 gramme, was injected on each side at a sitting, the hypodermic

needle (from six to eight centimetres long) being thrust into the affected pulmonary parenchyma either anteriorly, through a spot just above the clavicle, or through the second intercostal space; or posteriorly, through the supraspinat fossa (which spot is said to be most convenient of all). The injections were repeated every third or fourth day. The results are described as "very good." Cough soon ceased almost completely, while the sputum became considerably more scanty. In less severe or less advanced cases, the patient's general nutrition markedly improved, and his body's weight correspondingly increased, dyspnoea and night-sweats disappearing altogether. Even some improvement in local physical signs (decrease of dullness over the region affected) was thought to be often observed. The injection was invariably followed, in from five to eight hours, by a gradual return of the (febrile) temperature to the standard, the fall lasting in the beginning of the treatment only for ten or twelve hours, but later on the fever ceased altogether. Dr. Rosenbusch asserts that the creosote injection does not cause any strong pain, and, generally, is borne by patients quite well. He never saw any toxic effects even after a number of the injections. Neither did he observe any pulmonary bleeding, except in one patient with a hæmorrhagic tendency, in whom there appeared a slight staining of the sputum on one occasion, to disappear spontaneously in a couple of hours. An insufficiently deep introduction of the needle may give rise to a stitching pain depending upon the irritation of the pleura, but the pain soon ceases. When the drug happens to be injected into a cavity or a large bronchus, the patient feels, during coughing, a characteristic odour of creosote, whose presence then can be demonstrated also by a chemical way. It is hardly necessary to add that Dr. Rosenbusch recommends all antiseptic precautions (washing out the patient's skin, the needle, syringe, etc.). The injection must be performed slowly; the patient should be ordered to abstain from deep breathing, and to lie quite quietly for several minutes after each injection.

Case of Medical Poisoning by Pilocarpine, successfully treated by Atropia.—At a meeting of the Medical Section of the Polish Naturalist's Society of Posen, Dr. Boleslaw Wicherkiewicz communicated (*Wiadomosci Lekarskie*, No. 7, 1888, p. 194) a very instructive case of a therapeutical poisoning by pilocarpine. A well-nourished, though rather pale and nervous (migrainous) Polish lady, aged forty, sought the author's advice on account of an inveterated and ever-progressing failure of her sight. An examination revealed considerable inflammatory, neuritic, and chorioiditic changes in the region of the yellow macula, as well as numerous small-sized opacities all over the vitreous bodies, especially of the right eye. The lady's heart, kidney, and all other organs generally, were carefully examined, and proved to be seemingly healthy. A half-syringeful (Pravaz) of a 2 per cent. solution, or one centigramme, of pilocarpine was injected under her frontal skin. The injection was rapidly followed by profuse salivation and perspiration, as well as by continuous nausea and vomiting. In fifteen or twenty minutes there appeared incontinence of urine and (liquid) fæces, extreme pallor of the face, cyanosis of the lips, immobile contraction of the pupils, great acceleration of the pulse (110 to 130 per minute). An injection of 0.005 of morphia into the epigastrium failed to relieve sickness. In spite of a free administration of a strong black coffee infusion and old Hungarian wine, all the symptoms remained unabated, except salivation and perspiration, which somewhat lessened in a few hours. Later on, there supervened frequent prolonged arrests of the pulse, and spasms of the posterior cervical muscles, which recurred every ten or fifteen minutes, lasted for a half or one minute, and were accompanied by rolling of the eyeballs upwards and loss of consciousness. The spasms became rarer and milder after four large tumblerfuls of a strong wine, and inhalations of nitrite of amyl. The patient fell asleep for half an hour, but on her awakening, all the symptoms returned with their former severity. The lady's state growing steadily more and more alarming, Dr. Wicherkiewicz resorted at last, ten hours after the pilocarpine injection, to that of 0.001 gramme (two drops of 1 per cent. solution) of atropia. A striking general improvement took place almost immediately. In fifteen minutes her pulse became quite regular (eighty per minute), the pupils dilated, the respiration normal, sickness and spasms disappeared tracelessly. Two hours later, the lady was found to be "quite free from symptoms, and smiling."

Ether Spray in Excessive Vomiting.—Dr. Yopkiewicz (a Polish name, pronounced "Yopkevitch") describes (*Gazeta Lekarska*, March 31st, 1888, and the *Vratch*, No. 14, 1888, p. 272) the case of a weak girl of two months, in whom, without any apparent cause, there suddenly set in an incessant violent vomiting, first with indigested milk, then with mucus, and ultimately with blood. Neither any internal nor external means, however assiduously employed for two hours, would bring the slightest relief. The child's pulse became progressively weaker, the body's surface colder, death threatening every moment. An ether spray

was then directed by Dr. Yopkiewicz to the infant's epigastrium. In about twenty seconds the vomiting ceased. It reappeared for a short time ten minutes later, after which the child's recovery progressed quite satisfactorily.

Bacteriology of Syphilis.—Dr. Aristarkh I. Smirnoff, of Kazan, has recently undertaken (*Kazan Inaugural Dissertation*, 1888; and the *Vratch*, No. 13, 1888, p. 252) bacterioscopic researches in order to verify Lustgarten's statements concerning the existence of a specific pathogenic rod-shaped microbe of syphilis. His material consisted of a fluid discharge collected from syphilitic ulcers and papulæ, and various solid syphilitic morbid products; it was taken from about 100 patients. The preparations were stained after the methods of Lustgarten, Doutrelepoint and Schuetz, De Giacomini and Gram. The results may be given thus: *a. Fluid Discharge from Syphilitic Ulcers, etc.* (1) In the discharge of syphilitic ulcers and papulæ, micro-organisms are met with, but not always. (2) When met, the morphological and biological characteristic features of the predominating species of microbes are usually identical with those of the microbes met in the same regions in healthy persons. (3) In the normal secretions of the sexual region, bacilli and cocci are met as often as in syphilitic fluid secretions. (4) After a preceding local use of calomel and iodoform no microbes can be detected in the discharge of syphilitic ulcers and papulæ. *b. Solid Syphilitic Products.* (1) In solid syphilitic products microbes can be found but very rarely. (2) In the tissue of moist (mucous) papulæ micro-organisms occur comparatively more often than in syphilitic indurations. (3) In morphological respects, those microbes which are found in syphilitic solid products, present such a great variability that any generalisation concerning this point is positively impossible. Hence, *c. "The general conclusion* is that the existence of a specific micro-organism of syphilis, in the sense of Lustgarten's syphilitic bacillus, remains yet entirely unproved."

[Referring in flattering terms to the "capital work" of Dr. Smirnoff, Professor A. H. Gay, of Kazan, says (in his "Course of Venereal Diseases," 1888, third edition, p. 247) that he emphatically endorses the last proposition, and generally regards the whole question on the essential nature of the syphilitic contagion as yet unsettled. Hallier's *Caniothecium Syphiliticum*, Losterfer's "Corpuscles," Klebs's *Helicomonas*, Aufrecht's *Diplococcus*, and Birch-Hirschfeld's *Bacterium*, are thought by Professor Gay to be entitled to enjoy the reputation of a (or rather the) pathogenic microbe of syphilis as little as Lustgarten's rods. Somewhat less decisive is the judgment on the matter given by Professor Mikhail J. Afanasiëff, of St. Petersburg, in his excellent bacteriological reviews published (and beautifully illustrated) in C. L. Ricker's *Medical Annual Calendar*. In his review of 1886 (*Calendar for 1886*, vol. ii., p. 91), written shortly after the appearance of Lustgarten's paper, Professor Afanasiëff refers to his data as "fully trustworthy." Since the work in question has issued from Professor Weigert's laboratory, and, besides, because Lustgarten's statements have soon found a confirmation on the part of Doutrelepoint and Schuetz. In his review of 1888 (*Calendar for 1888*, vol. ii., p. 179), the author gives a drawing of Lustgarten's syphilitic bacterium from a broad condyloma, and details De Giacomini's and Gottstein's methods of detecting the microbe in a simplified and improved (comparatively with Lustgarten's plan) way. At the same time he confesses that "the significance of the bacillus has been considerably lessened" by the subsequent researches of Alvarez Tavel, Matterstock Klemperer, and von Zeissl. These observers state: (1) That in healthy persons of both sexes, the smegma contains fairly often such bacilli which are closely resembling, if not wholly identical with, those of syphilis; (2) that the smegma-rods are stained very much in the same manner as the syphilitic bacilli as well as those of tuberculosis; and (3) that they, the observers, have been unable to find any syphilitic bacteria in the sections made of various solid syphilitic products. Still, Professor Afanasiëff thinks that the researches of Weigert, Doutrelepoint, Bitter, and others, have proved (1) "that there exists a distinct difference between the tubercle-bacillus, and the bacillus of syphilis respectively smegma: after the treatment by nitric acid and subsequently by alcohol, the latter rods become entirely colourless, while the former do not; and, (2) that, after all, there does exist a certain, though slight, difference between the syphilitic rod and that of smegma." The fact is that "many of the observers were able to demonstrate most typical Lustgarten's bacilli in slices taken from various solid morbid products of primary, secondary, and even tertiary syphilis, which rods evidently could not possibly have anything in common with the microbe occurring in the smegma, that is, on the surface of the integuments. On the other hand, no rods of the kind could be detected in sections made of various non-syphilitic morbid products." All cultivation experiments with Lustgarten's microbe have as yet proved unsuccessful. In conclusion, Dr. Afanasiëff mentions the very latest pretender to the title of the specific syphilitic microbe. It is a "peculiar encapsulated diplococcus, 1.8 micro-millimeter long,

found by Drs. Disse and Taguchi, of Japan, in the blood of syphilitic persons." These Japanese bacteriologists allege even that "the inoculation of pure cultures of their microbe gave rise to set of morbid lesions, resembling internal (visceral) syphilis, but not associated with any primary phenomena or any cutaneous changes." Since Drs. Disse and Taguchi are the first observers who have proved lucky enough to find some bacteria in the blood of the syphilitic, Professor Afanasiëff recommends, for the present, to accept their observations "with a certain caution."—*Reporter.*]

III.—SELECTIONS FROM SPANISH AND PORTUGUESE MEDICAL JOURNALS.

BY G. F. CADOGAN-MASTERMAN, M.D.

Injeccões Intra-Pulmonares. Alfredo Luiz Lopes (*A Medicina Contemporanea*, Lisbon, May, 1888).—At the present day we are accustomed to regard almost all morbid processes as the result of the influence of certain organisms known generically as microbes, and therapeutics may be said to have been resolved into the art of sterilizing or destroying them. Now, it is obvious, in those cases in which the mischief is purely local or so, at least, in its initial stage, that the remedy should be, if practicable, applied locally also, so that—if for no better reason—its debilitation, or even complete decomposition, in its passage through the alimentary tract and the general circulation may be avoided. This is especially the case in phthisis, and two modes are in vogue for carrying it into effect—inhalation and inter-pulmonary injection. The former is necessarily imperfect in the direction of exact localisation, whether we use atomised fluids or air impregnated with vapour, but little of either can really reach the diseased portion of the lung, and none at all in the case of closed excavations; whilst the larger bronchial tubes receive generally much more than enough, to the possible irritation of their sensitive mucous lining, the excitation of cough, and the great discomfort of the patient. And the generally disappointing results of this mode of treatment may be referred to one or the other of these inherent defects. By inter-pulmonary injections we may secure, however, all the advantages of local medication, and avoid—it must be admitted, with some cost to the patient—the defects of the alternative mode of using it. And the major premiss being conceded, there remains only the selection of the best and safest mode of carrying it into effect. Percussion and auscultation point out the sites where the injection may be most easily made, whilst our knowledge of regional anatomy and some manual dexterity should enable us to minimise the danger of thrusting a long, rigid tube, with a sharp point, into an extremely vascular organ, which it is difficult to keep at rest, even for the short time the little operation demands.

Before attempting the procedure on human beings, it was tried many times on various animals by Koch, Lepine, Truc, and others, without any apparent injury ensuing in a single instance. Mosler and Pepper, of Philadelphia, would seem to have first used it in practice (1867); then Fraenkel in 1882; and Lokolowski in the following year. And they have had many followers, in spite of the sneer of Hayem, that in its inception the operation was more remarkable for audacity than good judgment. Robinson, of New York, has within the last two years performed the operation forty-five times, with most encouraging results; and Pepper, after making 282 injections in seventeen cases, states that he obtained invariably relief of the cough and dyspnoea, with lessened expectoration, and generally improved stethoscopic indications. Equally good results have been recorded by Lepine in fifteen cases, and by Blake White in eleven. And Gouguenheim, in 1886, says that in thirty-three cases of tubercle treated in this way, he saw marked improvement in twenty-one, the refractory cases being those in which the pulmonary mischief was complicated by laryngeal phthisis, intestinal tubercle and general cachexia.

The instrument ordinarily used is the Pravaz syringe with a slender needle (No. 1 Dieulefoy), of about eighty millimetres in length—3.25 inches. The site of the puncture would, of course, be mainly indicated by that of the portion of lung diseased, with due avoidance of perilous areas. In most cases it is made from behind, in the space between the scapula and the spine, or beneath the former; in others, the infra-axillary line is preferable; and, at any point of insertion, by passing the needle obliquely in either direction, a very considerable angular range may be secured. Anteriorly, the neighbourhood of the sternum must be avoided, and *à fortiori* that of the heart. The puncture must be very quickly made and to the depth—usually 62 to 75 mm.—previously carefully determined, and at the moment of pause after a full inspiration, or, according to Blake White, after two or three very deep inspirations (which, it is well known, lead to considerable anaesthesia), the fluid should be gently expelled, and then the needle instantly withdrawn.

The germicide used is not referred to by the author, but the quantity used should not exceed the ordinary Pravaz syringe-ful—x. to xv. M—

and no more must be injected at each sitting. It should be comfortably warm, and the whole of the instrument should be sterilized before use. In order to avoid the not very remote possibility of the needle breaking, it is recommended never to use one more than twelve or fifteen times.

The operation, when skilfully performed, is almost painless, but a little cocaine may be previously injected, or the skin frozen by ether, if thought necessary. It sometimes excites cough, which is best relieved by a few whiffs of chloroform. Hæmoptysis very rarely occurs, and is always of short duration, and any slight febrile reaction is equally evanescent.

Amigdalotomia doble hecha entre un Médico y la Difteria. Dr. Simonena (*Revista de Ciencias Médicas*, Barcelona).—More than a year ago a lady brought her daughter, æt. eight and a half years, to the author for treatment. The child was thin, pale, weak and cachectic, suffering from enlarged tonsils in an exaggerated form, could swallow only with great difficulty, and breathed noisily and intermittently almost entirely through the nostrils; yet keeping her mouth partly open, which, with the peculiar frown of half-deafness, gave her an expression nearly fatuous and altogether pitiable. Three months earlier she had been a healthy, rosy, and intelligent child. She had had some medical treatment, with the usual round of domestic remedies; and, although the utter futility of these was pointed out to the mother, the slight operation of ablation was rejected, because it was an operation, and fresh medication was tried for another two months, when it was at length unwillingly accepted.

The poor child, half starved, and with badly aerated blood, had become so irritable and obstinate that the procedure was far from easy. But the tonsils were well painted with a 5 per cent. solution of cocaine, and, her attention being distracted, the ring of Maisonneuve's guillotine was slipped over the right tonsil and, with some difficulty, the greater part was cut away, and the tip of the uvula accidentally, but happily, sliced off at the same time. There was slight hæmorrhage, easily checked by cold water. She lived in San Baudilio, but, as diphtheria is endemic in that village, the child was kept in Barcelona until the wound had healed. A week or two after her return home Dr. Simonena was called to see her, and found a patch of unmistakable diphtheria covering the still very large left tonsil, which speedily extended to the cicatrix of the other. However, although the child was extremely ill, under the influence of perchloride of iron and good feeding she slowly recovered, and then it was found that the left tonsil had disappeared as completely as the other—hence the title of this paper. Its object, however, is to point out the great mischief which may ensue from the neglect of a condition so easily operatively removed, and which is so often looked upon as the result of a cachexia of which it is really the cause, and of which this was a typical case. We have here the healthy child of healthy parents, with the fauces slowly but progressively obstructed by an hypertrophy, of which it would be difficult to trace the source, and its primary results are inanition from difficulty in deglutition—the child preferring semi-starvation to the pain of swallowing—and imperfect aëration of the blood from impeded respiration, the latter being intensified by tumescence of the mucous lining of the nares—markedly shown in this case—apparently form a condition of chronic catarrh, or, possibly, due to pressure by the enlarged tonsils on the pterygoid venous plexus. Then there was deafness, of that kind which Suñé y Molist, so happily defines as the *dysecaa of "eh?"* (*Los grados de la sordera*). This "throat deafness" used to be referred to pressure by the swollen tonsils on the mouth of the Eustachian tubes, but Mouren and Berthier have shown that it is due to the extension of the tonsillar or nasal phlegmasia to the tubes themselves, and may lead to irremediable trouble in the middle ear. And lastly, we have the cerebral mischief, which may depend in part upon the general cachexia, but mainly upon mechanical interference with the current of blood in the internal jugular vein. It has been proved, however, that tumefaction of the Schneiderian membrane (and the analogous pressure of a nasal polypus) may produce epilepsy, and if in a less degree the nocturnal terrors of children, nightmare, and frightful dreams. The induced cachexia in these cases is well shown in the general pallor, the soft and inelastic feel of the muscles, and the dull apathy which transforms in a few weeks a bright and lively child into the reverse of its former self.

In a succeeding number of the *Revista* Señor Cormina reports a very similar case—that of a little girl of nine years, who, within the last six, had suffered from meningitis, enteric fever, stridulous laryngitis, measles, pleurisy, and finally scarlet fever. For the last five years there had been chronic enlargement of the tonsils; in the height of the latter disease the swelling suddenly disappeared, and never returned. He could find no evidence of suppuration, and believes that the wasting was due to resolution. There are, however, so many cases in which a quinsy has discharged into the pharynx, sometimes without the knowledge of the patient, that this opinion is at least open to doubt.

La Medicación Nitrogenada. By Dr. E. Bertrán Rubio (*Idem*).—In the capital, and all the principal towns in Spain, nitrogenated water has been prepared and sold for some years past under the patent of Don Arturo Avilés. The process is almost identical with that used in the manufacture of our own so-called soda-water, which is usually innocent of alkali, and often owes as much of its effervescent excellence to compressed atmospheric air as to the more legitimate carbonic acid. Nitrogen is obtained from the air by passing the latter over burning phosphorus. The gas is carefully washed with milk of lime, and then compressed into filtered water by the apparatus known in the peninsula as that of Mondolot, and stored for use in strong bottles, or "syphons."

The use of this gas was suggested by its occurrence in certain mineral waters, notably those of Panticosa, Urberuaga, and Caldas de Oviedo, which owe their sparkling effervescence to its presence. And, as these springs are of the very mildest, in fact not be distinguished from good drinking water, and of the ordinary temperature, the astonishing cures which have made them so famous must clearly be due to the nitrogen, and not to the pure mountain air—Panticosa is 1,636 metres above the sea—the change in scene and diet, and the early hours of its *ci-devant* dyspeptic votaries. At least, so say the agreeable and accomplished medical men whose pleasant duty it is to welcome all classes of invalids, especially the apætic, the hysterical and the *malade imaginaire*, to the springs, and after the course of the waters, which etiquette has rigorously defined, to send them home again in perfect health. It is true that the chemist and the physiologist persist in regarding nitrogen in its free state as perfectly inert; and the ingenious hypothesis of Gubler, that it exists in these waters in an allotropic form, has met with little support, for it has not an atom of fact to sustain it, and is laughed to scorn by the author. But then, how is one to account for the results? "That during an infinity of years the waters of Panticosa have been recommended and used with the happiest results in a multitude of diseases, how shall climatology, the slight saline traces in our celebrated pyrenean spring account for the *quid oculum*" (which suggests the reprehensible practice of tobacco chewing), "the mysterious property of its insipid but nitrogen-saturated waters?" "The gas," is the obvious answer; and the author cites many authorities favourable to the view that nitrogen in its free state is not inert, but the active inhabitant of oxygen; that it does not merely dilute it in the air, "as the man of science who belongs to that class of philosophers who have the weakness to consider themselves infallible, and the misfortune to regard themselves as omniscient," has hitherto believed and taught, but restrains it with active energy.

He quotes at length Sieffermann, who points out the difference between rarified and super-nitrogenated air. At great elevations the pulse is full and hard, the respiration anxious and laboured, and the appetite diminished almost to anorexia. In hyper-nitrogenated air, the pulse is filiform and soft, the respiration easy, without dyspnoea, and the appetite is normal or improved. But he neglects to notice the very different conditions in all other respects of an Alpine climber or a balloonist, and of a man comfortably seated in a warm chamber through which the air is imperceptibly flowing, and without the slightest fatigue, or any anxiety as to the way in which he may reach the lower world again.

From the springs the author comes to the bottled water, and this is assumed to be quite as valuable as the former—and that, *per se*, one is just as valuable as the other may be readily conceded; but what is the value? At the ordinary pressure of the air, water can retain only a trace of the gas, its co-efficient of solubility in water being 0.0203. Therefore, if the bottle contain even two volumes of the gas, how much will remain in the tumbler, and how much reach the patient's stomach? As in a bottle of soda-water, just so much is retained in solution as can be dissolved at the temperature of the water at the time it is poured out; and whether the cork be ejected with a bang, or drawn with the feeblest of fizzes, the amount will be precisely the same.

The question is still an open one if any free nitrogen can be absorbed by the animal organism. By plants, it has lately been made probable, that such is the case to a slight extent; but after all, it must be so little, and its action, if any, so feeble, that although nitrogenated water may as a whim of fashion become a rival to soda-water, it is hardly likely to have any therapeutic utility.

IV.—NOTES FROM EGYPT.

TRANSLATION FROM THE ARABIC MEDICAL JOURNAL,
AL SHIFFA, APRIL 15th, 1888, CAIRO, EGYPT.

LIVING in free England, with free institutions and a free press, you can hardly realise what it is to have a censorship over your writings, and to be reprimanded if you criticise or speak the truth, or to be suppressed. The oldest Medical Society of Strasburg was recently dissolved by an Imperial order from the German Government, without

a word of explanation. In Egypt our Arabic paper has been reprimanded, and as we look to the *Provincial Medical Journal* to ventilate Egyptian matters, and set forth before English readers the truth, we send you the following correspondence, in the hope that you may bring public medical opinion to bear:—

Bilharzia Hæmatobia.—We have received from our amiable *confrère*, Dr. Fouquet, the following letter, which we hasten to publish:

"My dear *confrère*,—In the February number of your excellent journal you wrote to one of your correspondents that no specific remedy had as yet been discovered for the hæmatobia caused by bilharzia hæmatobia. This information is no longer exact, as you will see by the accompanying pamphlet, which I published in 1885, and which was reviewed at the time by Dr. Karali, of Tintah, in the *Maglatafi*. (The review of this pamphlet by Dr. Karali was also published in the first volume of *Al Shiffa*, page 149.—*Corr.*) The treatment that I uphold is very simple, and up till now has proved infallible in every case where the invalid persevered with the remedy from six weeks to three months. The blood disappears from the urine after a few days' treatment. I employ the capsules of the ethereal extract of male-fern, giving from one to four capsules a day, according to the age and strength of the patient, and taking care to administer the medicine at least one hour before meals. Besides the fifteen cases related in my monograph, I can to-day add another thirty, not counting the cases reported by Dr. Richer, of Cairo, and Dr. Shieso Bey, of Alexandria, that go to confirm this little discovery. I should be much obliged to you if you would publish my letter in the April number of your journal, and I beg you to accept, my dear *confrère*, the expression of my sentiments.

(Signed) — FOUQUET."

Note by the Editor.—When we published our article "On the Treatment of Bilharzia Hæmatobia," we did not forget the remedy proposed as a specific by our estimable friend, Dr. Fouquet, but we have simply considered it like all the other remedies employed for this disease, as being only palliative, and we have considered the recoveries of the fifteen cases already published as due not so much to the specific action of a drug, as to the combined effect of all the other means employed. Our conviction in this matter remains the same, for we know very well that this malady often disappears by itself without any treatment further than a strict *regime*, and the removal of the causes that give rise to the disease (*e.g.*, all the ingesta to be cooked, and the drinking water boiled). We are at the same time very glad to know that Dr. Fouquet is assiduously prosecuting researches on the subject, and that he is now able to report other thirty cases of cure by the same remedy. Whatever may be the merit of this treatment, we beg our medical colleagues to try it on their patients, so as to extend the field of observation, and permit of a solid judgment being come to on the matter. We do not wish to let this opportunity slip of sounding the praises of our able *confrère* for his criticism on us, as this denotes that although he does not know Arabic, he has made himself acquainted with the articles in our publication (*Al Shiffa*), notwithstanding the trouble of having to employ an interpreter. This is not the first time that he has given us the proof of what we now advance. His numerous communications are to be found in *Al Shiffa*, which confirm our statement. Every time we think of this—every time that we compare with this our own indifference—we ought to be ashamed, we who read the Arabic language, but yet allow the dust of the tombs to cover the journal we find in our hands shut—that we open not; but even if open, that we read not; and if by chance we do read it, yet we remain as inert as before. It does not even suggest an idea to us, nor does it elicit from us a single observation; just as if it were a shroud, and we dead. Every time that we see a manifestation of this thirst after knowledge and research on the part of the Occidental, we are bound to admire his activity, and we ought not to be astonished at his progress; but while we are in despair about our own state, we ought not to be astonished, under the circumstances, at being left behind. What increases still more our despair is our being content to rest on the laurels of our ancestors, and our denying to foreigners any glory, on account of the obscurity of their progenitors, as if our ancient but faded glory should outvie their glory so recently obtained. As for us Orientals, if the truth is to be told, we prefer the indignation of him who says of the Occidentals, "Censure to the ancestors, but praise to the children," to the glorification of him who said of the Orientals, "Praise to the ancestors, but censure to the children," progress being the nobility of man, while standing still or going backward is his shame. We are in reality dead except for the actions that are prompted by a vile jealousy and hatred. We are not moved by the motive of utility. We do not understand its sense nor its value, and we do not comprehend merit; we know not how to recognise it. We are actuated by motives of vengeance, as if we were sensible only to that which gives pain. We do not exclude neither our princes nor our men of science,

You may tell the latter that we have treated them with contempt, and that history, which is a severe judge, has already done the same. Unhappy the people whose men are but big children. The straightforward man is he who deceives not by his flatteries, though he knows full well that flatteries please. We have more than enough of evil that they have caused; but he who speaks openly and loudly the truth, must anger some, for it is the truth that wounds, and those who cry out most are the men of straw, and such whose rage we fear not; on the contrary, we make it a duty to be disagreeable to them, in the interest of the nation and of the country.

The above editorial note was written in too classical Arabic for the young censor of the press to understand, so he had recourse to the interpretation of those who have a spite against the *Shiffa*, and the result was the following thunderbolt:—

TRANSLATION.

Ministry of the Interior, Cairo,
Press Bureau. 14 Shaaban, 1305.
Manager of the *Shiffa*.

You have published in your third number for the 15th April, 1888, a letter under the title "Bilharzia," and in commenting upon it through a paragraph emanating from your stubbornness, you have criticised certain particular persons; you have even attacked certain princes, and certain men of science, which is no part of the duty of your journal. You have gone beyond the limits of the engagement entered into with respect to your journal, and you have interfered with administrative affairs. On that account we send you this "avertisement," and if you again transgress, you will be treated according to article 13 of the Press Law. You will have to publish this "avertisement" on the first page of your next issue.

(Signed)

Minister of the Interior,

MUSTALA PASHA FAHMY.

The above request was complied with, but with the following commentary:—It seems that we are wrong in saying that in as far as science is concerned the Orientals are dead, and that their men are but children, who feel only that which wounds them, and even that must be inflicted so as to be engraved on the mind, and not be dissipated in the air. The proof that we are wrong would be this severe "avertisement" emanating from the stubbornness of the Press Bureau, and of the Ministry of the Interior. This "avertisement" we insert here as a signboard, for if we have erred in that which we have said, it will serve as a warning to us, and we gratefully accept it without endeavouring to elude it; if, on the contrary, we are right, do you not see on it a mark in our favour; but do excuse those who have addressed it to us. It is to history that belongs the indisputable right to attach to men's actions either shame or glory. Yet the words that we have addressed to ourselves, "we who read the Arabic language," great and small, prince and boor, learned and ignorant, apply as much to Egypt as to Syria, to Syria as to Irak, to Irak as to Algeria, etc.—in a word, they embrace all the Arabic-speaking countries. Consequently, the terms in which we have expressed ourselves give the lie to the phrase by which the Minister of the Interior pretends that we have "criticised certain particular persons, and attacked certain princes and certain men of science." If so, who are those particular persons? Let them come with us before the tribunals, as we are led to believe that Egypt of to-day is administered by law and not by despotism. If, on the other hand, we have been dealing with generalities, it appears to us that we have a right to do so, which, moreover, is the right of everyone.

We are persuaded that there must be a misunderstanding in this matter, else the said ministry would not have treated us in a fashion so discouraging, in recompense for scientific labours that we pursued spontaneously for many years with a noble and general aim, not having the slightest *penchant* to be engaged by the Government with a particular and vile object in view. Certainly, had we served in the last capacity, we should have followed a more lucrative way; but it is well that it should be known that men vary in opinion as in elevation of spirit. In saying this we do not mean to vaunt ourselves, but to show, on the contrary, that if, notwithstanding our weakness, we have been able unaided to render some service, it is the duty of every member of society to give to his actions an aim more general than that which attaches to his own proper person, at the risk of being considered a useless member of society. There is no merit in fulfilling one's duty to one's neighbours, but blame attaches to him who neglects it. If we have said that all the Orient, without exception, is plunged in a profound scientific and literary torpor, we are convinced that no one will dare to contradict us. If we have been severe rather than mild in our remarks, it has been only to attract attention, and have our voice listened to. For great evils we must have great remedies, and our malady is certainly deep-seated. We have said nothing but what other respectable journals repeat every day; nothing that Professor Virchow

has not said in the Egyptian Medical Society. We do not, however, forget the proverb, "The patronising eye sees no faults, while the jealous eye perceives only defects." If we have criticised our own faults, it is because we are persuaded that the nations that are making progress in civilisation are those that make their faults an object of constant study, with the view of rectifying them. Having this conviction, we prefer to follow these rather than those that try to conceal their faults, and that make themselves believe that they have imaginary qualities—an illusion which never fails to end disastrously. In all this our sole aim has been to aspire to elevated things, and to raise ourselves above vile and base things, with the hope of being able to make for ourselves a real and worthy existence, which would permit us to be not always for the social body what parasites are to the human body, not knowing how to weave a dress nor make a needle. It is the seal of this noble aim that has marked all that we have written since we have taken the pen in hand, and nothing will turn us aside from it; and when we are opposed in the accomplishment of our object, we defy censure to inspire us with fear. We fail to see in what respect we have gone beyond the limits assigned to our journal.

Arabic Medical Journalism of the Present Day. The New Egyptian Medical Society, and the Visit of Professor Virchow.—For some considerable time past, strong appeals have been made, through the medium of the Arabic medical journal *Al Shiffa*, as well as through the English and American medical journals, to the native Egyptian medical men, to rouse them from their natural lethargy (which requires some effort on their part to throw off), and to stimulate their ambition for the progress of Egyptian medicine, which demands that they should read up and keep themselves *au fait* with every advance in European medicine.

The majority of the native medical men know nothing but Arabic, so that from the time they left the medical schools to go to practise their profession in the provinces, they had nothing to guide them but their Arabic text-books, which are translations of French and German medical works that were themselves out of date before the translations were completed.

Several attempts have been made to bridge over the gap that separated the practitioner from the medical school, and from obtaining any further knowledge of European medicine than he could gather from his old-fangled Arabic text-books. These attempts all proved failures from the lack of the *vis a tergo*.

It is now more than two years since this force has been called into play, and the effect has been marvellous, showing that whatever awakens the native out of his natural somnolence, sets free his activity, which mediæval history proves to be a substantial factor in his constitution.

The monthly appearance of *Al Shiffa* (a medical review of Eastern and Western medicine, edited by Dr. Schmeil, a clever and energetic Syrian physician, who is aided by a number of native and European medical men interested in the advancement of Egyptian medicine) has by its very existence, but more especially by its practical and telling articles, stirred up a healthy jealousy that has called into the field another monthly Arabic journal, *Al Saha*, edited by the Sanitary Department of the Government. *Al Shiffa* has been rewarded by the Government authorities for the medical renaissance it has produced by withdrawing the subscriptions from it, and by lavishing them on the *Shiffa's* child (*Al Saha*). The *Shiffa*, however, still survives, and continues to cast a fatherly glance on its offspring, and even administer to it the correctional rod when it errs. It will be of the greatest advantage to Egyptian medicine that both these journals should go on, and they ought to be both equally supported by the Government, if the ruling powers care to advance Egyptian medicine. The teaching nowadays between these two medical journals has been and continues to be very amusing, so that the native medical men have become quite lively, and are now thoroughly wide awake to a good many of their deficiencies, one of which is the lack of unity among themselves. This, however, will now be remedied by the new native Medical Society, which was inaugurated so felicitously a few weeks ago by H. E. Asfur Pasha, and which has been further strengthened on its basis and consolidated in its path by the presence at its last meeting of Professor Virchow, who delivered to the society and to a large concourse of European medical and other *invités* the following address:—

"Gentlemen, you have given me the greatest pleasure by affording me an opportunity of appearing in the midst of your new Egyptian Medical Society. On this special occasion I have been enabled to enlarge my acquaintance, and to cultivate friendly relations with estimable *confrères*—an acquaintance and friendly relations that had already existed between me and some of you. For this I tender you my most cordial thanks. Medicine, like the sister natural science, has this great advantage, that its truths are not affected either by the difference of nations and countries, or by the difference of religions

and occupations. The truths of medicine have a universal value, and for this reason they can easily be transmitted from one people to another. One school may become the teacher of other schools, and all medical men ought to consider themselves as brethren. Europe has not forgotten that the Arab medical schools preserved the doctrines and even the works of the great Grecian masters, at a time when all the West was in a state of ignorance and darkness. It was from the North of Africa that Constantine¹ brought to Italy the basis of our science, and it was from Spain that France received its first impulses. Salerno and Montpellier became the centres whence the scientific movement spread over the West. And now that we Europeans have actually been able to pay the interest on the capital handed down to us by our ancestors, my heart is filled with joy ineffable. I am also delighted to have learned with certainty that the Medical School of Cairo is already sufficiently consolidated to become a teaching centre for modern study and research. Those who have drawn up the programme for this school, and who have founded in connection with it institutions for carrying out practical research, know very well the distinctive characters of modern medicine—speculation has given place to objective research, hypothesis to observation, and argumentation to experience. It is to the everlasting glory of this country that at the School of Alexandria, under the Ptolemy's human anatomy (with dissections and vivisections) was taught more than one thousand five hundred years before the great reforms of the year. Paracelsus, Vesalius, Harvey, etc., had succeeded in doing away with the dogmatic system, and in establishing the great methods of the modern schools for those of the Greeks and Arabs. To those who, like you, see before their eyes the colossal works of the Ptolemy's at Edfou, Esneh, and all the other gigantic ancient monuments still existing, the time elapsed since their construction, to our day, will seem much shorter than it does to us Europeans who have borne for several centuries the heavy burden of progressive research. Now the medical school at Cairo is actually participating with us in carrying out a programme of work founded on modern ideas, and I hail it as one of our allies. It is for you, then, honourable colleagues, to show that you are the worthy successors of the ancient Alexandrians, and that you are able to give to your countrymen all the guarantees for knowledge and ability which do not merely consist in diagnosing diseases and in curing them, but above all in preventing their development. Many ameliorations are spontaneously produced here by the favourable nature of the country. Need I refer you to the disappearance of the plague, and to other maladies that have lost their original force. There still remain, however, great problems to be solved in order to remove other dangers created by man himself. I call your attention to the neglected state of your towns and villages as to the disposal of their excrementitious matter, which has become a vital question in our European towns. Parasitic diseases that are much more frequent in Egypt than in any European country, call for the united efforts of the doctors, public health officers, and of scientists, to throw light on the sources of parasitic infection, the history of the parasites themselves and of their germs, and the manner of their proration in the human body. In this way it will be possible to arrive at a practical result which will enable us to eradicate the parasitic diseases everywhere, when we set to work about it. Now work is the best prerogative of man. It increases his personal forces; it braces up his courage, and gives satisfaction, which is its best reward. Allow me, my honourable colleagues, to congratulate you that you have such important problems committed to you to solve. I hope the Cairo Medical School, and the new Egyptian Medical Society will take a very high place among their elder sisters, and that the modern Arabic literature will be made up largely by medical men who will be referred to by the future historians of medicine as equal, if not superior, to those who have largely contributed to the literature of the time of the Khalifs."

As Professor Virchow's address was delivered in German, and translated paragraph by paragraph into Arabic, it was dull and senseless to those who knew neither German nor Arabic. It must have been owing to this that there was no after speech on the part of any of the audience, and no vote of thanks accorded to the renowned guest. The whole thing had been arranged on such short notice, that it is not to be wondered at that some important parts of the proceedings had not been arranged beforehand; hence, the French translation of the speech had to go a-begging for someone to read it, but no one was found courageous enough to attempt to read a caligraph he had not seen before. This was an irreparable loss to the audience, as we think we may safely say that everyone, or at least almost everyone, and certainly all the Europeans, would have understood the French, and would have caught

the gist of the address, and thus might have had something to say on the spur of the moment, to draw still more abundantly from the well of knowledge that was then within our reach. As it is, we have only to regret the circumstance that prevented this. Now that we know the contents of the address, we shall endeavour to make up for our mismanagement by giving as wide a circulation as possible to the expression of our gratitude for the impulse given us to work, work, work, by such a distinguished worker as Virchow is himself. Before making our observations on his speech, we wish to say a few words about the speaker:—

Professor Virchow, as all the world may know, has been elected President of the International Medical Congress, that will be held at Berlin in 1890. This is the highest position attainable in the profession. He is not only the greatest pathologist and microscopist of the day, but he is also a statesman of no mean attainment, even Bismarck finds him occasionally a rather hard nut to crack. Besides, he is an eminent scientist, who single-handed, goes out to meet his giant opponents, Spencer, Huxley, Tyndall, and Darwin, with the weapons of a David. At a recent congress of scientists at Wiesbaden, he declared that "the Darwinian doctrine of the transmutation of species and mechanical evolution are fundamentally false, unscientific, and impossible, and that science can no longer afford to move along a line which seeks to construct its phenomena upon an imaginary and impossible basis. Were Christians as eager to set forth the constant presence of our Almighty Creator as infidels are to be rid of His existence, the Millennium would be nearer than it is." This is no uncertain sound, but on the contrary is a sweeping statement concerning a theory that many of us have in a superficial way accepted as being plausible, and not subversive of the belief in an ever-present Almighty Creator, who, though resting from further creative acts, takes daily pleasure in seeing and superintending the developments of His original plan. The fact, however, that such a profound thinker as we must all acknowledge Virchow to be, has so recently and publicly denounced the Darwinian theory in such unmistakable language, as being a Godless conception and a scientific fraud, makes us tyros in both religion and science stand aghast and reconsider our position, seeing that hitherto we had thought Darwinism to be compatible with religion as well as with science, while it was plausible in itself and explained to our shallow intellects the varieties in nature that could only otherwise be accounted for by constant acts of creation.

(To be continued.)

V.—THERAPEUTICS.

THE NEW ANTIPYRETICS.

(Continued from p. 284.)

2. *Antifebrine*.—This, like antipyrine, is a proprietary name for *Acetalinide*, the term being selected to keep in view its pyretic action. Chemists would seem to be searching for remedies which lower temperature, as if that were the great desideratum. We venture to state that if *antipyrine*, *antifebrine*, and *phenacetine* had only the property of reducing heat they would very soon fall into disuse, and would not recompense the chemists who have produced them. We have seen that antipyrine has other uses besides that of reducing pyrexia; what is to be said of antifebrine? Dr. Lauder Brunton thus describes its action and uses: "It has been introduced as an antipyretic in man, and it has been given in typhoid fever, erysipelas, rheumatic fever, and other febrile conditions. It reduces the temperature rapidly, the effect lasting from three to seven hours, according to the size of the dose. The pulse is slowed, and the patient often falls into a quiet sleep. *No vomiting or diarrhoea has been noticed, but there is some tendency to collapse.* A quarter of a gramme of antifebrine is said to have the same effect as one gramme of antipyrine." The dose is a quarter to one gramme, not exceeding two grammes in twenty-four hours. Dr. Brunton describes it as a pure white crystalline powder (odourless), producing a slight burning sensation on the tongue, being soluble in 180 parts of water at 60° C., more soluble in boiling water, freely soluble in alcohol, wine, and in ether.¹ The favourable report on its action is not confirmed by all observers. We find in the *Lancet*, July 9th, 1887, a warning that its action is uncertain, and that it is liable to produce violent sweats, prostration, hæmorrhage, and cyanosis. Bokai is of opinion that the cyanosis observed in man is caused by vascular spasm. Bokai carried on a number of experiments at the Klausenburg Institute of Experimental Pathology. As they were chiefly made upon animals, as rabbits and dogs, we can only inferentially apply his results to man. We are indebted to Drs. Kahn and Hepp,² of Strasburg, for the first study of the substance, which has been taken up subsequently by Lepine,

¹ Constantinus Africanus was a monk of the eleventh century of our era. He was the first to translate Arabic medical works into Latin, which was at that time a well-known language all over the West.—*J.A.S.G.*

¹ "Pharmacology, Therapeutics, and Materia Medica," 3rd edition, 1887, p. 825.

² Kahn and Hepp, "*Central. für Klin. Med.*," 1886.

Dujardin-Beaumont, Charcot, Weill, Evans, Osler, Germain Sée, and others. From an excellent summary of Dr. E. Stow Brown, in the *Medical Analectic*, April, 1888, we are able to compare the results obtained by many writers in different countries who have tried the agent.

Physiological Action, Nervous System.—Lepine,¹ Dujardin-Beaumont, Grunneberg, Charcot, Weill,² agree in the power of antifebrine to diminish the reflex excitability of the spinal cord. It acts especially on the respiratory function, which is markedly slowed. According to Heinemann³ deafness and mydriasis have occasionally occurred with therapeutic doses.

Circulatory System.—Antifebrine at first stimulates the vaso-motor constrictor system, leading to increased arterial tension. This effect is soon followed by dilatation of the cutaneous arterioles, and perspiration immediately appears. The effect upon the heart, blood vessels, and blood, is very prompt. The heart at first is slightly quickened, then slowed and strengthened. Prolonged use of the drug is said to produce fatty degeneration of the heart-muscle.⁴

Temperature.—Antifebrine reduces normal temperature by influencing both heat production and heat dissipation, and it reduces high fever by decreasing heat production.

Alimentary Tract, has no influence on the digestive system.

Skin.—Only rarely is an eruption produced. The action of the drug is almost invariably accompanied by profuse perspiration.

Urine.—The urine is greatly increased in amount, the drug may be recovered from it.

Therapeutical Action.—As an *analgesic* Dujardin-Beaumont claims that antifebrine should be placed in the same group with antipyrine and phenol.⁵ Demeville reports the relief of eighty cases of all varieties of pain, migraine, neuralgias, tabes dorsalis, etc.

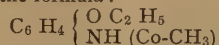
As a *hypnotic* it has been used by Dr. Dalton Hays,⁶ who reports on it favourably, in five grain doses, increasing them if necessary.

As an *antispasmodic* it has not been found useful.

As an *antipyretic* it has been tested against fevers of nearly all types. The temperature lowers in about an hour, and remains lower for about six hours (Brown). The drug to be given in doses of from four to ten grains. In the fever of phthisis it has been markedly useful. In rheumatism it has relieved the symptoms at the beginning of an articular attack. It has been tried by Choupe as a uterine sedative.

It must be remembered that antifebrine has produced: (1) violent sweats; (2) prostration; (3) cyanosis; (4) irregularity of pulse; (5) collapse; (6) clonic spasms. That even seven and a half grains have caused alarming symptoms. It is, moreover, uncertain in its action. Our personal experience has not been favourable, and we have discarded it, owing to its having produced symptoms of collapse in a man, aged thirty-nine, to whom we gave five grains. We consider that we have safer antipyretics than any of the new ones, and if charts of fever are to be taken as the test, we can produce some from the Halifax Fever Borough Hospital, showing a drop from a high to a low temperature, with an old fashioned remedy, gone out of fashion. It is a mistake to attach too much importance to the mere reduction of temperature. Occasionally, with a temperature 107° or 110°, it is all essential to bring it down, but such temperatures are rare. The synthetically prepared alkaloids have been, we fancy, produced in the search for the philosopher's stone of modern days—how to produce quinine artificially—and we may expect to have a further number of them, as the aromatic series seems favourable ground.

3. Phenacetin.—The more correct name is *Para-acetphenetidine*, and is represented by the formula:



It is evidently related to antifebrine. Phenacetin is a slightly red inodorous and tasteless powder, feebly soluble in water, a little more so in glycerine, freely soluble in hot alcohol. It is an antipyretic, and has been tried in nearly all the diseases for which antifebrine has been recommended. Mr. H. Osborne Grenfell, in the *Practitioner*, May, 1888, has an article on "The Treatment of Pyrexia with Phenacetin," arriving at the conclusion that "it is an undoubted antipyretic. In cases of pyrexia the action of the drug begins within half an hour after administration. The patient generally perspires freely, and feels drowsy. Sleep often follows, and pain is relieved. The most satis-

factory dose for an adult is about eight grains, children bear the medicine well. It has been used as an analgesic in neuralgia with good results." These views of its action correspond with those of foreign observers. The name of Dr. Köbler has been associated with the drug, and we are able to give a *resumé* of his experiences as they are detailed in a pamphlet sent to us. "Dr. Köbler has employed *Phenacetin* in doses of eight to twelve grains on healthy persons, and has not observed any ill-effects. In fever, or at fever temperature, doses of from ten to twelve grains produce lowering of temperature from 2.7° to 4.5° Fahr., the pulse improving. There are no disagreeable after effects, either in the shape of nausea, vomiting, or cyanosis. Dr. Hoppe has confirmed Dr. Köbler's experiences. In neuralgia the drug has succeeded, owing to its sedative action on the nervous system. Dr. Heusner has prescribed it largely in migraine, gastralgia, insomnia, and his patients have rapidly improved under its use. Dr. Heusner observes, "Contrary to quinine and bromide of potassium, phenacetin does not cause lassitudes or other disagreeable symptoms, and is easily taken on account of its tastelessness." Children bear the medicine well in doses of from three to seven grains. It has been employed in children's diseases by Dr. Köbler and Dr. Heusner.

V.—OBSTETRICS AND GYNÆCOLOGY.

New Operation for Repair of Lacerated Perineum. By Alexander Duke, F.K.Q.C.P., Obstetric Physician to Steven's Hospital; Ex-Assistant Master of the Rotunda Hospital.—I wish to bring before the notice of my gynecological brethren an operation I have designed for the restoration of a lacerated perineum, easy of performance, and which will, when properly executed, form a good perineal floor, and I might also say practically a new perineal body. The patient having been prepared by the usual preliminary steps required for the old operation, when under the influence of an anæsthetic is placed either in the lithotomy or Sim's position, the left index finger being introduced almost its entire length into the rectum, a long straight double-edged bistoury is made to pierce the tissues in front of the anus at right angles to the vulva; and, guided by the finger in the rectum, is made to penetrate the septum for 2½ inches upwards, the incision being enlarged laterally to two inches, at least, as the knife is withdrawn. On the two points of incision being pressed together from side to side a lozenge-shaped opening appears, and when all the sutures required have been introduced and are properly adjusted and approximated, the two cut surfaces are brought into direct apposition. The sutures are introduced by a strong cycle-shaped needle with eye in point mounted on handle, strong silver wire being the suture preferred. The needle is introduced at centre of skin incision below, and guided by the finger in rectum, is made to travel over cut surface to its full extent above, describing the arc of a circle, and on the point of needle appearing directly opposite is threaded with suture and drawn through. On the ends of this suture being pulled together by the fingers a good idea can be formed of how many additional stitches may be required. When all considered necessary have been introduced and approximated, a finger of each hand passed into rectum and vagina will at once recognise the gain in thickness of septum, the external tissue being pushed fully an inch forwards from anus, and forming a thick and solid perineal body. The incision being a deep one, on union taking place between the raw surfaces a considerable depth of support must be afforded where a pessary is required, or where there is much tendency to prolapse of the uterus or vaginal walls. My experience of the operation, although up to the present limited, has satisfied me with the results, and there being no loss of tissue whatever, should the operation fail it cannot add any difficulty to a subsequent one. If some gynecologist possessed of larger opportunities will give the operation a trial I shall not be afraid of the result. Even should the perineum be lacerated to very verge of anus what I describe can be done. I find that leaving the sutures for only three days is best, but if I fear the union is not strong I cut the wire leaving it *in situ* for a day or two longer, thus affording some support and relieving the strain on the edge of sutures holes, and I also support the parts by long strips of adhesive plaster carried from hip to hip over new perineum. The wire should be stout silver wire and not too tightly twisted. My friend Dr. More-Madden has kindly given my operation a fair trial, and was much pleased with the results, especially in one of his cases where the old operation of denuding the surfaces had been tried previously and failed owing to the patient's poor state of health and want of healing power. The advantages of my operation are briefly these:—1. The simplest of performance as yet proposed. No danger of hæmorrhage, the surfaces being brought together at once, wound dry and clean. 2. No danger of sepsis as the incision is not open for the admission of any discharge from either vagina or rectum during healing process. 3. No loss of tissue, and consequently no harm done should the operation fail.

¹ Lepine, *Compt rend. de la Soc. de Biologie*, July 1st, 1887.

² *Bull. Gen. de Therapeutique*, February 28th, 1887.

³ *Mün. Med. Woch.*, January 17th, 1887.

⁴ *Gaillard's Medical Journal*, February, 1888.

⁵ *L'Abeille Medicale*.

⁶ *Medical Record*, December 17th, 1887.

The Spirit of the Societies.

THE AMERICAN MEDICAL ASSOCIATION.

THIRTY-NINTH ANNUAL MEETING, HELD AT CINCINNATI,
MAY 8th, 9th, 10th, 11th, 1888.

(From our own Correspondent.)

WE know more of what is done in Europe than you know of what is done in America, as our papers give us, by cable, the latest English news. This remark applies to the lay press. I fancy that the same might be applied to the medical. We are conversant with your medical affairs over here. We have our correspondents who furnish us with the letters from the European centres of Medical Education; I do not find that you reciprocate. The *British Medical Journal* or the *Lancet* do not have American correspondents. You have, I hope, introduced a new departure by asking for information as to our American Medical Association. The space in your columns will not be wasted, because we have something to tell you worth listening to, and you ought to know what we are doing—an English-speaking and English-writing people—it is your duty to follow our literature and our doings. Am I coming it too strong? Am I soaring on the American Eagle and taking a flight?—No. But I must stop and confine myself to pure business and to facts.

Well, we have had a big and successful meeting—you know everything in America is big (though not necessarily successful.—*Ed.*). The friends of the association were in strong force and form. The President, Dr. H. P. GARNETT, of Washington, gave us a practical address on the Mission of the American Medical Association. It has a mission, and it means to carry it out. I send you a few extracts from the address:—

"In casting about for a subject," said Dr. GARNETT, "more concrete in its nature, and directly useful in its application, I have determined to submit for your consideration a few practical reflections upon the mission of the American Medical Association. I am especially moved to select this subject at this time by the fact that at no period since the formation of the American Medical Association have its enemies been so bold, so reckless, and so unscrupulous in their efforts to destroy its influence and power with the medical men of this country. The paternal relation held by this organization to the entire medical profession of the United States, imposes upon it duties and responsibilities of the gravest character. It stands out before the world as the chosen custodian of all that pertains to the preservation and advancement of professional interests, as well as to medical science *per se*; it is intrusted with the delicate and difficult task of elevating and maintaining the medical character of this country upon the highest moral and intellectual plane."

Dr. GARNETT gave an approximate estimate of the number of schools and medical practitioners in the state. He said, "That the professions of law and medicine are over-crowded in this country, no man of common observation will deny. The ratio of professional men in the United States to the population exceeds that of any other country in the civilized world, so that any legitimate means of checking this evil, which can be devised and carried into practical effect, must be hailed by the medical world, as well as the general public, as an inestimable boon. Total number of medical schools in the United States, 126; of these ninety-five are 'regular,' eleven are 'eclectic,' thirteen are 'homœopathic,' three are 'physio-medical,' and four are too indefinite for accurate description. For the present year 1888, upon the basis of a population in the United States of 61,420,000, the ratio of practitioners of medicine to the population will average about one to every 580. In the city of Washington we have one practitioner to about every 485 inhabitants."

The excessive number of practitioners turned out by so many schools causes the pressure in the race for a livelihood, and still more, owing to defective training, the lives of the people are endangered by the class of men who are practising—both licensed and unlicensed. The President wants reform, and reform in a practical direction. This part of the address is important, and I give it in full:—

"Entertaining the views above expressed, based in part upon these tabulated expositions, and inspired by the hope of initiating some practical move in the direction of educational reform, I respectfully submit for your consideration the following suggestions:—

PROPOSITION I.—That a standing committee, to be called a committee on legislation, be appointed for each State, Territory, and the District of Columbia, to consist of five members of the medical profession in good standing, three of whom shall have no official connection with any medical school or college, whose duty it shall be to carry out as far as possible the following instructions:—

First.—That each one of said committee, or a majority thereof, shall attend the sessions of their respective legislatures, or, from time to time, as their duties may require, for the purpose of using all honourable means looking to the reduction of the number of medical schools in the United States, and a consequent diminution in the annual number of medical graduates; that as a practical measure to this end they urge the passage of a law requiring that in the future granting of charters for creating medical schools, there shall be a clause in every such charter, requiring that all schools or colleges thus created shall demand a full term of four years' study before granting a diploma to any student thereof, and that no student shall be admitted to matriculate who has not passed a satisfactory examination, both oral and written, in the ordinary branches of academic study; and, further, that any college failing to show a greater number than fifty matriculates annually, for three consecutive years, shall forfeit its charter and be abolished.

Second.—That they use all diligent effort to secure an ordinance creating in each State and Territory, where no such board at present exists, and the District of Columbia, a board of medical examiners, which shall have no connection with any medical school, and which shall be required to examine all applicants for license to practise medicine in their respective States, Territories, and the District of Columbia; and that any person who may be detected in practising any branch of the healing art without a license granted by said board, shall be subject to such penalties as the law may provide. That this committee may be authorized by statute to select and nominate to the governors of the States, Territories, and the District of Columbia, seven competent and learned members of the medical profession to constitute said board of examiners, who shall have the exclusive power to issue licenses, to practise the art and science of medicine and surgery.

Third.—That the chairman of said committee of five be required to submit at each annual meeting of this association a report embracing a full statement of what has been accomplished by each.

PROPOSITION 2.—That the faculties of the several medical schools within the limits of the United States be once more urgently requested to call a convention at some central point, for the purpose of consultation, and adopting some general and uniform system of medical education, more comprehensive and rigid in its requirements, and more in accord with the spirit of the age and the advanced progress of medical science, suggesting a four years' term of study, the requirement of a preliminary education, including some knowledge of the classics. That any college or school which shall refuse to enter into such an arrangement as may be decided upon by said convention, shall be excluded from all connection with the American Medical Association, and its alumni not recognized as members of the regular profession.

I am aware that these suggestions embrace some very radical and seemingly impracticable changes; but as they point, in my judgment, to the right direction, I trust that they may not prove to be seeds sown upon barren soil. Be that as it may, I shall at least enjoy the consciousness of having honestly, conscientiously, and fearlessly met the great and pressing issue of the day within the domain of our profession, and of having executed, to the best of my ability, the most important duty imposed by the responsible position to which you have elevated me."

The address concluded with flattering allusions to the late Congress, and to the part played therein by the American Medical Association, and the future work of the Association was indicated to be one of progress, in the direction of strengthening the medical aspirations of American medicine.

The address in Medicine was delivered by Dr. ROBERTS BARTHOW, LL.D., so well known for his researches in therapeutics. He opened his oration with the following words:—

"The last International Medical Congress, in some respects, was the most important of this series," and then he went to show how the lay press failed to rise to the occasion, owing to the wide-spread attitude of indifference in the lay world as to the importance of the medical profession as a science, apart from its business aspects. This feeling is fostered by pamphlets, such as are issued by a Dr. Somers, of the homœopathic school. This brochure, scattered broadcast, proved by statistics, *which did not exist*, that homœopathic practice was 30 to 50 per cent. more successful than allopathic. Exposure had no effect. The profession must continue on the lines it was now working on—*viz.*, to improve our art. How? He tells us:—

"As a teacher of therapeutics for many years, I could not fail to observe that the attainments of the profession in respect to the powers of medicines are not as fully developed as they ought to be. They do not have that familiarity with the physiological powers of drugs which the effective use of remedies demands. It thus happens that the highest precision is not attained. Vague notions take the place of scientific accuracy when such has been the progress in this department, that a considerable degree of certainty should be the rule. It must be

admitted that the acquisition of therapeutical skill has been greatly hampered by the complexity of the materials. The barnacles of a century have been accumulating on the framework, and the new knowledge has been thrust into the crevices of old notions until all is made to appear confused and uncertain. The subject should be divested of its superfluities. The list of preparations given in the "United States Pharmacopœia"—our only official authority—can be greatly curtailed with advantage. Remedies long in use and of comparatively little value are overloaded with formulæ. The preparations of iron given by the Pharmacopœia are thirty-eight in number, of mercury twenty-five, of rhubarb fifteen, of aloes as many. One-third of these could perform the duty of all. The botanical and pharmaceutical details are such that to master them would require the whole of the time given to the medical studies. If obtained, such knowledge is of small value to physicians; therefore it should be turned over to the pharmacist, to whom it properly belongs. It needs no argument to show that to accomplish the best results, not only the remedy in its crude form but its constituents must be accurately known. Whenever an active principle is not available, the most concentrated preparations should be prescribed. In an especial degree is it necessary to have complete information regarding the dosage and actions of alkaloids. Let me emphasize in the most positive manner the importance of using the alkaloids and active principles, for by them we have minuteness of dose, singleness of action, and precision of effect. That must be a true, exact, and intimate knowledge of the manner in which they act on the tissues and organs of the body. This knowledge, as it now stands only in part developed, is large, somewhat complicated, but quite available, and will richly compensate all who master its spirit and form."

He then spoke of physiological antagonism and of what had been achieved, and might still be achieved in this direction, and concluded as follows:—

"Next to the action of physiological antagonism as a means of securing accuracy in our therapeutical methods, must be placed the use of the physical forces. The important one, and that only to which I can allude, is electricity. Infinite harm has been done to this subject by specialism. It is not yet divorced from charlatany of the worst sort—the pseudo-scientific. The most serious embarrassment in assigning electricity to its rightful place in our *Materia Medica*, is the complexity of the subject. Unfortunately, no man can use the agent rightly who is unacquainted with its physics and physiology. Within the sphere of its curative action, it is simply unrivalled. That this strong statement is not universally accepted, is due to the fact that this force is not sufficiently studied, and not appreciated because its powers are not utilized. Professional scepticism, added to the ill-repute which comes of inveterate quackery, acts in turn on the minds of patients, and thus prejudice is engendered that constantly interferes with the proper development of the science. Notwithstanding the scepticism, or the positive unbelief, there are two facts that cannot be explained away or denied—for they rest on the immutable basis of physical truth. The first fact is, the power of galvanism to affect the circulation. The second fact is, electrolysis, or electrolytic decomposition.

Late researches have shown that a moderate galvanic current increases the vermicular action of the vessels, and thus increases the blood supply to a part, and the activity of the function of nutrition. On the other hand, strong currents tetanize the vessels and thus lessen the amount of blood passing to a part, diminishing congestion. The same laws hold good of the faradic current if the parts to be acted on are so situated that the electrodes come in contact with the tissues. As respects electrolysis, scepticism has no ground of opposition. The same laws that regulate polar action in electrolytic decomposition, must be equally applicable within the body as without, the same substances being acted on. The action of the electrical current on the vessels, the electrolytic decomposition of materials that can be thus acted on, have brought about results not hitherto attainable. Merely as indicating results now of daily procuring, and which, no doubt, receive full consideration in the Sections, I mention only the remarkable effects had in the treatment of pelvic congestion, inflammation and its products, of stricture of the urethra, and similar lesions. Again, in affections of the trophic system, cutaneous diseases, etc., quite a different aspect has been given them by electrical treatment. Nor should I fail to mention the quite remarkable results which have been lately achieved by the combined currents—galvano-faradic.

Will my brethren who practise the obstetric art permit me to ask why *post-partum* hæmorrhage shall not be promptly arrested by the faradic current, instead of by ergot, friction of the abdominal walls, and other reflex stimuli intended to secure the uterine contractions?

There is a vast field needing cultivation in the application of hygiene to therapeutics. The comparatively new method of the dietetic treatment of disease offers us remedial agencies which certainly approximate to exactness in method, and surety in result. Time and the occasion

permit me only to offer the merest hints for your serious and wise consideration."

The address in Surgery was delivered by Dr. MOORE, of Rochester. The sectional work was above the average. The papers, more especially in the section devoted to Obstetrics and Diseases of Women, were of great scientific and practical importance.

Dr. WATHEN, of Louisville, read a paper upon **Abdominal Section in Extra-Uterine Pregnancy**, in which he favoured operation as soon as the diagnosis could be made. In most cases the sac can be removed, and hæmorrhage controlled, by proper application of ligatures. The objection to operation on the ground of the difficulty of separating the sac is more theoretical than practical. If it cannot be removed, it may be left.

Dr. A. W. JOHNSON, of Danville, Ky., followed with a paper on the same subject. He claimed that the treatment by electricity at any period was wrong in principle, dangerous in practice, and disastrous in its results, and that it would soon be entirely discarded by the profession. To destroy the life of the fetus is not sufficient, the growth of the placenta must also be stopped. To do this requires such a shock to the pelvic nervous supply as to be dangerous. It is now established that the early cramping pains, attended with prostration of the patient, are really due to slight rupture of the tube. When electricity succeeds in destroying the life of the fetus, and checking the growth of the placenta, the danger is not over, the mother is still liable to septic infection from the remaining mass; and the subsequent history of these cases is often of chronic invalidism. Operation should be made as soon as the condition is discovered.

Dr. RUFUS B. HALL, of Cincinnati, made a **Plea for Early Operative Interference in Cases of Obscure Pelvic Pain**.—It is now known that recurrent attacks of pelvic peritonitis are very often due to disease of the Fallopian tubes. He would recommend the operation before the patient's general condition is too bad for recovery, and after careful treatment by other means had failed. By operation very many cases, doomed otherwise to life-long invalidism or to death, may be saved. By modern methods, and in experienced hands, the mortality from operation is not more than from two to six per cent. He cited Lawson Tait's experience, and the intense opposition he had encountered. The general profession being opposed to operation, allow these cases to die which ought to be relieved by operation. He reported one case, which having refused operative interference, died under "expectant" treatment, and two cases in which removal of the tubes and ovaries was followed by complete relief, and the restoration of the patients to complete health.

Dr. FRANKLIN N. MARTIN, of Chicago, read a paper on **The Value of Galvanism as applied by Apostoli in the Treatment of Fibroid Tumours of the Uterus**.—After briefly recounting the history of this method, with its growing success both in the New and Old World, the author describes his improvements as made in the construction of the intra-uterine electrode, by means of which an exact dosage can be attained. The surface of the endometrium exposed to the galvanic current is accurately determined by the size of electrode employed, those used by the author measuring two and four square centimetres respectively. He also exhibited the large abdominal electrode, consisting of a hollow metal disc filled with water and covered by animal membrane, as an improvement over the cake of clay employed by Apostoli. After briefly reviewing the history of cases thus treated by him, the author stated that from January 1st, 1887, to January 1st, 1888, he had used galvanism over 1,400 times in the treatment of fibroid tumours, 653 times in fifteen cases. Of these, five were completely cured, and five symptomatically benefited. After describing the method of using the galvanic current for the treatment of tumours, the author concluded his paper with the following summary:

1. A means of generating a continuous current of electricity of steady and uniform character, that can give an actual current strength through a resistance of two hundred ohms of five hundred milliamperes is necessary in order to obtain all the benefits of this treatment.

2. Fibroid tumours of small size can be completely absorbed by the proper application of strong currents of galvanism.

3. Hæmorrhages from hæmorrhagic fibroid tumours can be promptly cured by the local coagulating effect of the positive pole when it is applied intra-uterine. Severe neuralgias, so often accompanying these troubles, can invariably be relieved by three or four applications of this treatment.

4. When the cervical canal cannot be entered by any form of intra-uterine electrode, flexible or otherwise, after repeated trials, a negative galvano-puncture should be made into the presenting part of the obstructing mass of the tumour and an artificial canal opened, which is to take the place of the impenetrable uterine canal in all subsequent treatments.

5. The intra-uterine electrode should in all cases be negative, unless

there is hæmorrhage or excessive leucorrhœa, when the positive pole is always required. The same patient may, however, present symptoms demanding the use of both poles at successive operations.

6. The strength of the current should depend entirely upon the amount of active surface of the internal electrode, and should be twenty-five milliamperes for each square centimetre of active surface in actual contact with the endometrium. If more is used, the concentration of the current will be sufficient to cause troublesome cauterisation; if less is used, the concentration will not be sufficient to cause the necessary coagulation or checking hæmorrhage.

7. The duration of the treatment should be five minutes of the maximum current required.

8. The number of operations is necessarily dependent on and influenced by the result to be accomplished. A severe hæmorrhage can be checked and symptomatic relief can often be accomplished by four or five sèches, while a general reduction of the tumour necessitates many operations, varied, of course, according to the size and location. In some cases of large multiple tumours a relief of symptoms, or symptomatic cures, must be accepted as a substitute for an actual cure.

9. The operation should be intra-menstrual, if possible; if hæmorrhage is continuous, however, operate during flow. The sèches can occur as often as every day with the system of concentration adopted that enables one to attack different portions of the canal at succeeding treatments, or this can be given with advantage as few as once a week.

10. Since the adoption of the flexible intra-uterine electrodes and Dr. Apostoli's vaginal galvano-puncture, extra-uterine punctures should be regarded, if at all, only as a last resort.

11. Galvano-puncture needles and the internal electrodes should be constructed of material that is not injured by coming in contact with strong carbolic acid, or 1.1000 bichloride mercury solution. All internal electrodes should be thoroughly scrubbed with a nail-brush and soap and water after each application, and allowed to remain in one or the other of these standard antiseptic solutions until they are to be employed again, when they should be washed in a weaker solution of the same before using. Before a vaginal puncture is made the vagina should be thoroughly wiped out with a 1 to 3000 bichloride solution.

12. There is no excuse for any percentage of mortality in the proper application of this treatment. While Dr. Apostoli had two deaths in two hundred and seventy-five cases, he candidly admits they were due to avoidable accidents, rather than to any legitimate procedure of the operation.

13. In experienced hands, and by the adoption of the present means of concentration, the most delicate and sensitive patient can receive, without experiencing any severe discomfort, all the benefits to be derived from this valuable treatment.

Dr. A. B. CARPENTER, of Cleveland, O., next described a **New Method for Supplying the Electrolytic Current in Uterine Fibroids**.—The author spoke of the difficulty of keeping the ordinary physicians' batteries in good running order, and therefore devised a method of supplying the electric current at any time desired in the proper strength. He took his current directly from the street, using the electric current as furnished by the Edison light for this purpose. The Brush light is too dangerous, but the Edison system, which furnished an electric intensity of 100-110 volts, will not prove dangerous even with the entire strength outside of the rheostat. The author exhibited the working of his apparatus, with the wires attached from the street.

In opening the discussion, Dr. NEWMAN said that the electric current has always an electrolytic action, the amount depending on the strength used. If the current be small, the current will act as an absorbent; if large, it may prove destructive. He formerly claimed that a strong current should never be used, but in the light of recent developments he took it all back in considering the treatment of fibroid tumours, the large electrode diffusing the strength of one pole over the whole abdomen, overcoming the destructive tendency of a current of too great an intensity. The result will depend upon the concentration of the current upon the electrode. It is true that operators differ as regards the *modus operandi* in their treatment of tumours by electricity. Freeman, for instance, achieved good results with pointed needles. The speaker would, however, warn beginners against using needles with fine points, even in intra-uterine puncture, because it might be followed by fatal results. He himself used an intra-uterine sound, insulated, except at the end, to the depth of the uterus. This he attached to the negative pole and gradually passed it into the womb. If the canal be tortuous, this passing in may, at first, be difficult, but gradually the sound will enter deep. The opponents to the use of electricity for this purpose say that it does not always cure them. He would reply that the object is not to entirely remove them, but to diminish the size as much as possible, so that they become harmless. If more than this can be done, so much the better.

Dr. MARCY, of Boston, said that for his knowledge of the use of

galvanism, for its electrolytic action in tumours, he was first indebted to Dr. Cutter, of New York, whose pupil he was. At that time he saw cases benefited by this treatment, but also saw occasionally dangerous results. He then discarded its use, and was with great difficulty re-converted, until he heard of Apostoli's great success. He then again supplied himself with an electric apparatus, and since then had had unqualified success. If we could utilize the street lamps for this purpose, he regarded it as a great improvement, altogether a new departure. In conclusion, he greatly lauded the advances made by the two gentlemen in this direction, throwing additional lustre upon American gynaecology.

The Cincinnati *Lancet-Clinic* published a daily edition during the sitting, and I am able to send you some information taken from its pages.

The election of officers, 1889, resulted as follows: president, Dr. W. W. Dawson, Cincinnati; first vice-president, Dr. W. L. Schenck, Nebraska; second vice-president, Dr. Frank Woodbury, Philadelphia; third vice-president, Dr. H. O. Walker, Detroit; fourth vice-president, Dr. H. O. J. W. Bailey, Georgia; treasurer, Dr. Richard J. Dunglison, Philadelphia; permanent secretary, Dr. W. B. Atkinson, Philadelphia; librarian, Dr. C. H. A. Kleinschmidt, Washington.

The address on General Medicine will be given by Dr. Wm. Pepper, of Philadelphia.

The address on Surgery by Dr. P. S. Connor, of the Medical College of Ohio, Cincinnati.

The address on State Medicine by Dr. Wm. H. Welch, of John Hopkins University, Baltimore.

Newport, R.I. was chosen as the place of next meeting, in June, 1889. Dr. Horatio R. Storer, of Newport, was chosen as chairman of the committee of arrangements, and Dr. T. Courtlandt Parker, of Newport, secretary.

The following members were appointed *Delegates to Foreign Medical Societies*:—R. A. Plummer, M.D. of San Francisco; H. A. Kelly, M.D. of Philadelphia; N. S. Davis, M.D. of Chicago; W. H. Myers, M.D. of Fort Wayne, Indiana; A. E. Hoadly, M.D. of Chicago; I. E. Waxham, M.D. of Chicago; Alex. McAllister, M.D. of Camden, N.J.; J. J. Chisholm, M.D. of Baltimore; D. A. K. Steele, M.D. of Chicago; J. V. Shoemaker, M.D. of Philadelphia; S. J. Jones, M.D. of Chicago; J. E. Owens, M.D. of Chicago; Ephraim Cutter, M.D. of New York; L. A. Sayre, M.D. of New York; V. C. Vaughan, M.D. of Ann Arbor, Michigan.

(To be continued.)

IMPERIAL ROYAL MEDICAL SOCIETY OF VIENNA, May 18th. **A Case of Sudden Blindness**.—Professor NOTHNAGEL brought forward a case of great interest. The patient, a tailor, who had usually enjoyed good health, some weeks ago suddenly lost his power of sight, but the way in which this occurrence had taken place could not be learned from the patient, as his intellectual faculties were impaired. The pupils were normal in size, they reacted well, and their movements were perfect. A short time ago the patient began to notice he could distinguish white and red colours, and the other colours always appeared to him to be grey. He had no idea of the size of the things shown to him. The conditions under consideration had been looked upon as being "hemanopsia inferior," of which there have only been three cases on record. In this case shown to the society, neither syphilitic antecedents nor the presence of an atheromatous process of the cerebral blood-vessels could be proven; it was, however, possible that such a process was present.

A Case of Lesion of the Skull.—Professor NOTHNAGEL showed a girl, aged eighteen, who, on June 29th last, had sustained a heavy stroke with a sabre on the parietal bone of the skull. She instantly lost consciousness and fell down. After the lapse of half an hour she recovered consciousness, but presented a paralysis of the right upper and lower extremities. Her speech and movements of the face were quite intact.

MEDICINISCH PHARMACEUTISCHE BEZIRKSVEREIN VON BERN. **Abdominal Massage in Habitual Constipation**.—Dr. BUELER read a very instructive paper on the above subject. The method (which was employed in rather a primitive form first by Dr. Tissot in 1780) seems to find favour. Of twenty persons treated by Dr. Bueler after this plan, eighteen were perfectly cured. The physiological effects of massage are said to be of four kinds:—1. The mechanical action, which is most important of all, and which is not limited to the gastro-intestinal contents but extends to the large abdominal glands, removing obstruction of ducts, etc. It has also proved useful in jaundice (depending on obstruction of the bile duct). The most powerful mechanical effects are produced by kneading, which loosens impacted fecal matters. 2. The reflex action of massage must be admitted in view of the

physiological fact, that on briefly touching the abdominal wall a contraction of the intestinal muscular coat always follows. The effect is best produced by slapping with moderate force. Certain cases of habitual constipation can be cured only by this method. Dr. Bueler related a case of a student who had been permanently cured, after having suffered for five years, after a treatment of eight weeks' duration. 3. The thermic action of massage is thought to be proved by Nosengeil's observations with Geissler's thermometer, the rise of the local temperature varying after a sitting from $\frac{1}{4}^{\circ}$ to 3° C., and lasting for three or four hours. To obtain the greatest thermic effects, dry manipulations are recommended. 4. The chemical action is more hypothetical. "The problem of the practitioner in every individual case of constipation before him," says Dr. Bueler, "is to find out which of the therapeutic elements of massage is most suitable and promising. This question being settled, the procedure can be considerably simplified by omitting all unnecessary manipulations." The author condemns a routine practice of massage in all cases without discrimination, and insists on the strictest adaptation of the treatment to each particular case. Thus in cases of chronic constipation, caused mainly by weakness, the tips of the thumbs and fingers should be inserted deeply between the edges of the muscles of the abdominal recti, along the linea alba. The muscles respond by sharp contractions, which are further intensified by strong transverse strokings in an outward direction from the middle line, at the same time the diaphragm should be strengthened by deep inspirations, etc. On the other hand, in cases of constipation depending on atony of the intestines (as is often the case in persons of sedentary habits), Dr. Bueler begins the sitting with gentle gradually intensified and deepened strokings, and finishes by moderately strong slapping. In cases of constipation caused by dyspepsia, he limits the manipulation to the gastric region. Two cases of this kind, treated twice weekly, were cured in four weeks. The author localises massage in a corresponding way also in cases of faecal accumulation in the caecum and sigmoid plexure. In habitual constipation dependent on cerebral or spinal neurasthenia (in hypochondriacal or hysterical patients), only such procedures as strong slappings with subsequent dry rubbings are indicated. In three of Dr. Bueler's patients, haemorrhoids half as big as an egg were present on several occasions, and they permanently disappeared in four weeks. Dr. Bueler says—"I was so charmed with this observation, that in future I will recommend to my haemorrhoidal patients abdominal massage as the first thing to be tried." The most disappointing results from the massage treatment seems to be obtained in cases of constipation depending upon adhesions left by previous attacks of general or local peritonitis. Dr. Bueler feels sure that a large proportion of similar adhesions is due to the exaggerated fears of practitioners "who keep ice bags on the belly or give opium too long." He thinks it would be more rational to resort to a gentle effleurage as early as possible after the disappearance of acute symptoms, in all cases of peritonitis.

OBSTETRICAL SOCIETY OF LONDON, May 2nd, Dr. JOHN WILLIAMS in the chair. **Cyst Connected with Uterus and Simulating Enlargement of that Organ.**—Dr. CULLINGWORTH described the case of a woman, aged twenty-three, admitted into hospital November 23rd, 1886, with an abdominal swelling that had been observed for five months. The catamenia were regular, but during her last pregnancy they had continued up to the seventh month.

CLINICAL SOCIETY OF LONDON, May 25th, 1888. **Rupture of Intestine without External Wound.**—Mr. HERBERT PAGE described two such cases. One was of a man aged fifty, over whose right iliac region a cab had passed on the morning of April 5th, and who was admitted into St. Mary's Hospital the following day in great pain, and with very marked collapse. Rupture of the intestine was diagnosed, but the amount of collapse seemed entirely to forbid laparotomy. There was no improvement, and he died next day, forty-four hours after the accident. At the *post-mortem*, a rupture of the bowel was found four feet and a half above the ileo-caecal valve; and in addition to some smaller contusions in the caecum and neighbouring ileum, and much mesenteric extravasation, there was a knuckle of deeply-congested gut, an inch and a half in length. The next case was a boy who had been butted in the belly—left iliac region—while at play with some other boys. He instantly had intense pain, and when admitted to the hospital sixteen hours afterwards, said he had been vomiting ever since the accident. There was nothing specially suggestive of perforation, or of the need of opening the abdomen. Opium was given, and for three days he seemed to improve. On the night of the fourth day, however, there was sudden collapse. He, however, rallied from this, and seemed doing well, but three days after the collapse returned. From this, there was no decided rally, and he died on August 6th. Necropsy revealed extensive hypogastric peritonitis, and offensive pus

in the left iliac fossa, where the blow had been given. A perforation was found in the small intestine. This opening had thickened edges, and was surrounded with lymph. It was believed that this perforation only occurred on the fourth or fifth day after the accident, as the result of the sloughing of a portion of recently contused gut, and Dr. Page pointed out that had laparotomy been done when the lad first came to the hospital, no more difficult question could have arisen than that of determining whether this contused piece ought or ought not to have been resected. It must be hard to meet with cases of abdominal injuries where there were no complications of any kind.

Case of Stone, in which Lithotomy was performed twice within two months.—Dr. WARD COUSINS (Southsea) described a case of a man, aged forty, fish dealer, who was admitted into the Hospital at Portsmouth in January, 1882. There was no family history of gout, rheumatism, or urinary trouble. He had been a great sufferer, and for nine months before his admission had been confined to bed. The urine was most offensive, and loaded with muco-pus. It often contained blood and small clots. The left loin was very tender and painful, and he had many attacks of orchitis in the same side. On sounding there was no thud or ring, but the bladder was filled with an immovable mass. Two ounces and a quarter of stinking concretion of the consistence of fresh matter were removed by lateral lithotomy. He left the hospital well in a month. Three weeks after he returned, with a stone lodged in the neck of the bladder. After vain efforts to seize it with the long forceps, and other efforts to return it into the bladder, so that it could be crushed, median lithotomy was performed. He was again discharged, apparently well, in three weeks. During the past six years he had been quite well, and able to carry on his daily business. The urine had been frequently examined; it still contained albumen, and a trace of muco-pus. No renal elements had been detected by the microscope. Since the operation, he had never passed any gravel or stone. He was in good health on May 20th, 1888. The dried concretion removed from the bladder, and also the urethral calculus removed at the second operation, were exhibited. Dr. Ward Cousins thought that all the symptoms clearly pointed to the fact that the patient was the subject of chronic calculous pyelitis, and that part of the renal gravel passed along the urinary passages, and escaped through the urethra, while another portion was trapped in the bladder. The operation insured a free and incontinent escape of urine, with complete rest for the diseased organ, and removing at once all painful micturition and painful straining. The second lithotomy was done to relieve the acute sufferings of the patient, after many attempts to remove the calculus through the urethra, or to return it into the bladder, so that it could be seized with the lithotrite. During the past six years the patient had enjoyed good health. Still, the patient ought not to be considered cured, as the urine contained a few pus-cells. Ought this to be considered as a local trouble or a constitutional disease?—Dr. ORD thought the consideration of the case a very important one, and suggested a commission should be appointed. The President nominated Dr. Ord, Dr. Maguire, Dr. Garrod, and Dr. Ward Cousins, as a committee to report on the case.

EPIDEMIOLOGICAL SOCIETY OF LONDON, May 9th. **Age, Sex, and Season, in relation to Scarlet Fever.**—Dr. WHITELEGGE read a paper, in which he gave an analysis of 6,000 cases, showing that the liability to scarlet was slight in infancy, reached its maximum in the fourth or fifth year, and diminished every year afterwards. The severity of the attack, however, was greatest in the first two years of age, and lessened year by year throughout childhood and adolescence. In adult life there was apparently a slight increase again, the reality of which was open to doubt. Females were more liable to attack than males at all ages after infancy, especially between the ages of twenty and thirty-five years, when the charge of children gave special facilities for infection. Dr. Whitelegge said infection from a previous case was the obvious explanation of many cases of human scarlet fever, and might be true of all, or nearly all; but it could not be the whole truth. Some further explanation was needed to account for the well-marked seasonal and other variations in the prevalence of the disease. There was a good discussion, in which Drs. Murray, Lawson, McKellar, E. C. Seaton, and Mr. Butterfield took part.

BRITISH GYNÆCOLOGICAL SOCIETY, June 13th.—Dr. BANTOCK showed several interesting specimens, amongst others of multiple fibroid removed from a single woman last month, weighing about one and a half pounds. She had suffered from dysmenorrhoea and severe menorrhagia, the latter being caused by the projection of several small fibroids into the cavity of the uterus. He asked what might have been anticipated as the result of the electrical treatment in such a case. As the patient was incapacitated from work by her sufferings and loss of blood he induced her to consent to his performing hysterectomy, which he did

with a perfectly satisfactory result. Another specimen had been removed from a widow, aged forty. This operation was attended with rather more difficulty, but no bad symptom followed it, not even a rise of temperature. He spoke highly of a new metal which he employed for the ecraseur, etc. The next case was one of enormous blood cyst of the ovary in a patient who had suffered for years from dysmenorrhœa and pain. He succeeded in getting it all out, and the patient was now quite convalescent. He then showed specimens of ovarian tumour in an early stage removed from a patient who had returned from India purposely to get relief from her sufferings.

Dr. ROUTH, while agreeing that the case was not one in which electricity could have been expected to have done much good, urged that the proper course would have been to dilate the uterus and ascertain what was the condition of things before taking other measures. He asked Dr. Bantock what he knew as to the etiology of the blood cyst of the ovary, whether there had been suppression of the catamenia, or "bad habits."

Dr. EDIS related two cases of fibroid on which he had operated. One was in a young widow, who wished to make a fresh start in life as a barmaid, but whose abdomen was so prominent as to subject her to annoying observations. He intended in the first instance to remove the ovaries, only hoping to lessen the hæmorrhage and procure a diminution in bulk, but in presence of so large a mass he decided to remove it *en bloc*, which he did with the most satisfactory results. The second case was one in which he had found cystic disease of the ovaries together with a fibroid twice the size of the fist. The patient was extremely debilitated on admission, and at first he merely attended to her general health and checked the hæmorrhage with hydrastis canadensis. As the relief, however, was only temporary, he opened the abdomen and removed both ovaries. He deprecated dilating the cervix in these cases, as suggested by Dr. Routh, such treatment in his opinion being both useless and dangerous.

Mr. LAWSON TAIT said that if electricity was not of use in such a case as that brought before them by Dr. Bantock it was no good at all. He objected to dilatation as difficult, dangerous, and, in the majority of cases, useless. He mentioned that a death had taken place at Liverpool last week in consequence of the electrical treatment, and he hoped the details would be published.

Dr. ROGERS made a few remarks to the effect that, while the electrical treatment did not prove fatal in exceptional instances, it afforded a means of treating fibroids, both large and small, without the risks of a major operation.

Dr. BANTOCK, in reply, denied that dilatation was part of the electrical treatment, which was resorted to in total ignorance as to what the condition of the interior of the uterus really was. He disclaimed any knowledge of the etiology of blood cysts of the ovary, and declined to believe that "bad habits" had anything to do with the causation of this or any other disease of the kind. He believed that nothing short of what he had done would have been successful in checking the hæmorrhage.

Mr. LAWSON TAIT availed himself of the opportunity to contradict the assertion of Dr. Howard Kelly made to the Cincinnati Medical Society, to the effect that he threw away his specimens so that no one could impugn his diagnosis. All the specimens he had ever removed were either in his own possession or with friends, or in public institutions. He then showed the specimen from a curious case of ruptured tubal pregnancy, which had been sent to him as one of acute ovaritis. He diagnosed suppuration and opened the abdomen, only to find that the tumour was a blood clot due to the rupture of a tubal pregnancy. The patient made a good recovery. Another specimen was from a wife of a medical man, respecting whom he had given an opinion in favour of pyo-salpinx two years ago, but who had been prevented coming to him by her medical attendant, a gentleman who objected to operations of that kind. Her sufferings had, however, continued unrelieved, and she recently returned to England and was operated on, the case turning out to be one of double pyo-salpinx. He also alluded to two cases of parovarian cyst in a child of four and a young woman of twenty-one. He said that the treatment he had adopted in the first case was to scrape the cavity, fill it with water and seal up the wound. So far the patient had done well. If it refilled he intended to tap and inject iodine. The second case was interesting because he had found tubercular disease of the Fallopian tube on one side. A previous case of this kind had recovered and remained well. He said that if this case also remained well, it would look as if tubercle was after all a local disease. He also showed an instrument which he had designed to facilitate the replacement of inversion of the uterus by pressing on the ring of constriction.

Mr. LAWSON TAIT then read a paper on **The Influence of Removal of the Uterine Appendages on the Sexual Appetite.**—He pointed out that in many points, the popular beliefs on the subject were remarkably erroneous, as for example that the removal of both testicles deprived a man of the power of fertilisation and also of engaging in sexual intercourse. He could find no fact in support of this view. It

was based apparently on a false analogy. Of course if the testicles were removed before puberty it might be true, but it did not apply to the removal of the testicles of an adult. In animals the desire and the power often survived, though the females seemed to "spot" the imperfection and refuse approach. He only knew of one case of removal of both testicles in an adult, and in that instance sexual intercourse, after a time, had been resumed with as much satisfaction as ever, though after the first two years no emission took place. He hoped that the history of other cases of a similar kind would be forthcoming. He was convinced that the ovaries had as little to do with the sexual appetite in women as, say, the front teeth. He mentioned seven cases of women whose ovaries had been removed while still virgins, and in whom, when married, no lack of sexual appetite was complained of. Still more remarkable was the evidence obtained from three young women in whom the uterus also had been removed while virgins. All of them gave evidence of strong sexual appetite. He concluded that, in men, the sexual appetite had not its seat in the testicles, and in women not in the ovaries, the tubes, or the uterus.

Dr. BANTOCK observed that in several cases the women had found no difference after the operation in the matter of sexual propensity. He said that in horses it was by no means uncommon for a colt to have an erection even when castration had been performed before puberty. He had heard that eunuchs were quite capable of complete erection.

Dr. HARVEY mentioned the case of a Jewess whose ovaries he had removed for severe menorrhagia, who made his life a burden by her complaints of having been deprived of sexual feeling. He said that as she did not know what had been done, her tale was probably a true one. He recalled that in India, where eunuchs were still made, it was generally held that unless a "clean sweep" was made of all the organs, including the penis, they were still capable of having intercourse.

Dr. HEYWOOD SMITH agreed that, as a rule, no effect was produced on the sexual appetite in women. In cases where such an effect was desired, clitoridectomy was the only sure operation.

Dr. FANCOURT BARNES said that difficulty lay in the question being a subjective one. He mentioned a case in which a previously erotic woman became calm after he had operated.

Dr. ROUTH argued that as old women, with withered and atrophied organs, were often very erotic, therefore the cause of the erotic feelings must be looked for elsewhere.

Dr. MANSELL-MOULLIN said that medical men were largely responsible for the erroneous notions that prevailed on the subject. Where circumstances justified removal of the ovaries or testicles the surgeon would operate without giving a thought to sexual proclivities. In the three or four cases in which he had removed the ovaries of young women they were unmarried and their evidence, therefore, was hardly available.

Mr. TAIT, in reply, explained that the legend had probably been copied from one book into another without putting it to the test of observation. In some cases he had known women to become positively and aggressively erotic after removal of the ovaries. This, however, was not the rule, or the propriety of removing the ovaries would have to be considered.

Surgical Aids and Appliances.

CARBON CONES.

WE have been invited to draw the attention of the profession to the new appliances for the infirmary or chamber, for distributing vapour or for direct inspiration. It is claimed that by their use a ready means is available for obtaining vapours of an extremely attenuated character, of high diffusive powers and great activity, either dry or accompanied with water-vapour. The materials are not decomposed in the process, but are constant in character, and can be adapted to load given air spaces with medicinal matters, so that the patient may receive constant influences therefrom in the act of continuous breathing. Their simplicity is evident, and if the contents can be accurately gauged, as there seems no reason to doubt, the medical man will be only too glad to welcome this invention, which will shortly supersede the cumbrous machinery of the average disinfectant—always attended, when steam is required, with the uncontrollable hot water kettle, so often allowed to burn dry, and then produce the most unpleasant results.

Dr. Germain Seé, in a recent lecture on "Pseudo Anæmia," points out that in syphilitic anæmia he has seen patients submitted during forty days to mercurial vapour, with the result of an entire cure. Under ordinary circumstances this process demands an elaborate arrangement and a special chamber for the patients, but with these cones the treatment can be most simplified, as will at once be seen. The company introducing this new feature supplies cones of different sizes, and in an almost infinite number of varieties, and we can recommend our readers to write for specimens and particulars.

Medical Miscellanea.

THE subject of our next illustration will be the late Professor Du Chaumont.

The Duke of Devonshire has given land for a new Convalescent Home for Children between Eastbourne and Beachy Head.

Dr. Eastwood, J.P., Darlington, has obtained £250 damages, with a full apology, against a paper which libelled him.

The annual meeting of the Durham Graduates Association took place at the University on June 19th, and was followed by a successful dinner.

Small-pox has broken out in Preston, and the sanitary authorities are doing all they can to stamp it out. Other towns adjacent are likewise taking precautions, as Preston is such a large centre.

Dr. MacRae, Laggon, has been appointed to the Commission of the Peace for the County of Inverness. Mr. Charles Brook, M.R.C.S.Eng., has been placed on the Commission of the Peace for Lincolnshire.

A law has been passed in Switzerland that a certain number of English doctors will be allowed to practise there, so that English visitors may now be treated by English medical men.

The Governor of New York has issued a Bill abolishing hanging for capital punishment, and substituting electricity in its place. The measure comes into effect in January next.

We are pleased to place on record that Mr. Pridgin Teale has been made a Fellow of the Royal Society. Only one other member of the profession has been elected this year—viz., Dr. Henry Trimen, Director of the Botanic Gardens, Ceylon.

The University of Bologna celebrated its centenary on June 12th. The King and Queen of Italy were present, as well as representatives of nearly every university in the world. Sir Spencer Wells and Dr. Weir Mitchel received honorary degrees in medicine.

The Second International Medical Congress of Australasia will take place at Melbourne on January 7th, 1889, and will continue for five days. All communications should be addressed to Professor Allan, M.D., The University, Melbourne, Victoria.

The German Emperor has conferred the order of the Red Eagle of the second class on Professor Virchow. Professor Virchow is one of the leaders of the liberal party in Germany, and one of the most determined opponents of Prince Bismarck, with whom he fought a duel many years ago.

The meeting of the British Medical Association at Glasgow promises to be a great success. There are a number of foreign visitors expected, and the excursions around Glasgow are too numerous to mention. Numerous receptions, etc., will be given during the week.

Professor McAlister, of Cambridge, is now the President of the Irish Graduates' Association. The Association has made a new departure in having one of its dinners in the provinces. On June 21st, in the hall of Gonville and Caius College, the graduates had a flow of reason and feast of soul.

Dr. Young, of Chicago, says, "Incidental to my last eclampsia case I may be permitted to cite a valuable addition to the terminology of the lying-in chamber. We say, our cow calved last night, or our mare will foal to-morrow, but we have no verb to express the like physiological acts in the genus *homo*. The patient was a primipara, who was attacked with convulsions before delivery, and did not recover consciousness until some hours afterwards. She awoke at length, and the first sound she heard was the cry of her infant; she looked up with a bewildered air, and said, 'What is that?' On being told, she exclaimed with delightful naiveté, 'Oh, I didn't know I had babied!'"

Manchester is likely to possess a Technical School and an enlarged School of Art, as the Whitworth Trustees have intimated that they are willing to increase the gifts they have made of a large piece of land to be used as a public park and site for a museum and other buildings, and that, with the Exhibition surplus of £40,000, the scheme may be carried out.

A meeting was held at 38, Portman-square, London, to decide what was to be done with the subscriptions to the late "Dr. Alfred Meadow's Fund." The subscriptions had reached £219 16s. 6d. A lecture or a pulpit was decided on, and on the motion of Sir Edward Sieveking, it was resolved to invest the remainder of the fund in the name of three trustees, with a view of founding biennial or triennial prizes in midwifery, bearing the name of the "Dr. Alfred Meadow's Prize" to be awarded to students of St. Mary's Hospital.

By the death of Mr. Robert Aked, of Halifax, on Monday evening, one of the oldest medical practitioners in the country has passed away. He was a native of Halifax, and has spent nearly the whole of his long life in his native town. Born in 1793, he outlived all his contemporaries, having attained the remarkably good old age of ninety-four years. He has had an extensive practice in the parish of Halifax, and has been highly respected by his medical brethren and fellow townsmen.

PRESENTATION OF A TESTIMONIAL TO DR. TALFOURD JONES.—We have now the pleasing duty of recording the presentation to Dr. Jones of a valuable testimonial from his many friends in this county. Some months back the governors and subscribers to the Brecknock County and Borough General Infirmary and others thought that the departure of Dr. Talfourd Jones from Brecknshire should be marked by some visible token of their esteem and appreciation of his services to the Infirmary for many years, and it was resolved to indicate this feeling by making him a presentation. Dr. Talfourd Jones was for a long time house surgeon to the Infirmary, and during the tenure of his office the advantages of that institution were widely spread—more so, perhaps, than at any period before or since. For sixteen years he was physician to the hospital—an office which he discharged with marked assiduity and care, and he gave the institution the advantages of his great medical skill quite gratuitously during this lengthened period. Shortly before leaving Brecon he resigned his office of physician, and the committee received his resignation with profound regret, and unanimously passed the following resolution: "That the cordial and hearty thanks of this committee be conveyed to Dr. Talfourd Jones for the very valuable and efficient professional service which he has rendered to this hospital and the public as house surgeon and honorary physician, for a period of twenty-two years, and while much regretting the cause of his leaving his native town, sincerely trust that his removal to Eastbourne will conduce to the full and speedy restoration to his usual health, and hope every happiness and prosperity may attend him and his family in their adopted home, and that the Secretary be requested to send a copy of this resolution to Dr. Talfourd Jones." At a subsequent special meeting of the general committee of the Infirmary, Dr. Jones was paid the compliment of being appointed Honorary Consulting Physician to the Hospital, an office which he can permanently retain in absentia.

The presentation was made last week, and the testimonial consisted of a sterling silver tea and coffee service and a breakfast tray, in Queen Anne's style, a reading lamp, a library writing set, and the following address, beautifully illuminated, which was signed on behalf of the subscribers by R. D. Cleasby, Esq., J.P., Pennoyre, Brecon:—

TO DR. TALFOURD JONES, M.B. LOND., M.R.C.S. ENG.,
L.S.A. LOND.

Scholar of Medicine and Gold Medallist of the University of London; Exhibitioner, Gold Medallist, and Life Governor of University College, London; Fellow of the Obstetrical Society of London; J.P. for Brecknock.

We, subscribers to the Brecknshire Infirmary, and others, desire to express to you our sincere regret at your departure from Brecon, and we recognise with much gratitude the eminent ability, and the unremitting zeal which you brought to the discharge of your duties as House Surgeon for six years, and subsequently as Physician for sixteen years. We beg to assure you that your labours in behalf of this institution, will be long remembered by all those who are connected with it, and we may be permitted to add that the loss of your medical advice and aid will be felt not only in this neighbourhood, but in South Wales generally; and as a slight recognition of your distinguished service, we beg you to accept the accompanying plate, and offer to you our heaviest wishes for your success and happiness in your new sphere of labour.

For the subscribers,
—Brecon County Times, June 8th, 1888.

RICHARD D. CLEASBY, Treasurer.

The *Vanguard* is a small monthly paper devoted to the encouragement of purity. It is a Church of England paper, and is unsparing in its condemnation of those religious papers which receive the filthy advertisements of the secret disease curers. The respectable religious papers exclude from their columns the advertisements of Nelson & Co. We trust that the appeal of the *Vanguard* to the Press may be successful.

Correspondence, Notes, and Queries.

Communications, Books, etc., should be addressed directly to the EDITOR, "The Provincial Medical Journal," Horton House, Halifax.

Matters of business should be addressed to the Publisher, at the Offices, 10, Friar Lane, Leicester; or to the London Representative, Mr. E. BELLA, 58, Charing Cross Road, W.C., to whom all communications respecting Advertisements should be addressed.

We cannot undertake to return rejected MSS. unless stamps sufficient for their postage are enclosed.

We shall be glad to receive reports of Medical Vacancies, Appointments, Meetings of Societies, etc.

Papers containing passages for consideration should be marked.

Correspondents must please attest their communications with their proper name and address (not necessarily for publication).

Contributions must be written on one side only of the paper.

MSS. intended for publication to be sent in not later than the 16th of the month.

The insertion of any letter in these columns cannot be taken as necessarily indicating our adhesion to the views or statements therein expressed. The same remark applies to articles to which a name or nom-de-plume is attached.

THE STATE OF THE PROFESSION.

To the Editor of "The Provincial Medical Journal."

SIR,—In looking over some back numbers of your interesting journal, I have come across, and read—re-read, rather—the series of papers written in response to your offer of a prize for the best essay on "The Cause of Low Fees in the Profession and the Remedy." The subject being of such vital importance to the profession at large, I may be pardoned for reverting to it.

Among the various causes assigned by your correspondents for cheap doctoring, is the number of men without means entering the profession, and who it is assumed are compelled to charge low fees in order to make a living. That your correspondent may be right in the main, I admit, but from what I have observed and heard, the offenders do not all come within that category. Judging by the style in which some of these men commence practice, printing and distributing handbills, renting shops in leading thoroughfares of our large towns, taking handsome private residences, and in some cases even a horse and carriage (this is a fact), their original outlay must be considerable. They have not even the poor plea of Shakespeare's lean apothecary to fall back on. What causes such men to embark on a course of practice so reprehensible is not so much circumstances as lack of principle and a greedy commercial spirit, quite alien to the practice of medicine. They hope, by underselling their more conscientious brethren, to tempt away patients, and thereby more easily and rapidly form a connection. The question comes "What attitude ought respectable practitioners to assume towards these gentry?" I say, most decidedly, one of uncompromising hostility. This may seem harsh counsel; but bear in mind we have to deal with men who deliberately degrade an honourable and noble profession in the eyes of the public, and who violate its most cherished traditions. Extreme measures are, I hold, justifiable in dealing with so grave an evil. When a district is invaded by men of this class we should (1) Avoid them socially; (2) Waive etiquette in the matter, retaining patients; (3) Only lend assistance when public censure might result in our refusal to aid; (4) When possible, refuse to meet consultants whom we know to be in the habit of conferring with them. The above programme may seem to savour somewhat of boycotting, or what Mr. Gladstone would call "exclusive dealing," but it is quite justifiable and also practicable. Rigorously carried out, such a plan would soon affect in a salutary manner public opinion; such men would soon be considered as little better than charlatans, and would be obliged to conform to the ordinary decencies of medical life, or else find scope for their cutting bias in conducting a sixpenny bazaar or some similar speculation. I enclose my card, and am yours, etc., M.

Lancaster, June 14th, 1888.

Bibliographical Record.

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- Anæsthetics: their Uses and Administration. By Dudley Wilmot Buxton, M.D., B.S. London: H. K. Lewis, 136, Gower-street.
 A Handbook of the Diseases of the Eye, and their Treatment. By Henry R. Swanzy, A.M., M.B., F.R.C.S.I. (illustrated.) London: H. K. Lewis, 136, Gower-street.
 A Practical Text-Book of the Diseases of Women. By Arthur H. N. Lewers, M.D. Lond. With Illustrations. London: H. K. Lewis, 136, Gower-street.
 The Sectional Anatomy of Congenital Cæcal Hernia. By E. H. Bennett, M.D. and D. J. Cunningham, M.D. London: H. K. Lewis, 136, Gower-street.
 An Introduction to the study of the British Pharmacopœia. By Rawdon MacNamara, Professor of Materia Medica, R.C.S.L., etc. pp. 121. London: H. K. Lewis, 136, Gower-street.
 A Text Book of Physiology. By John Gray M'Kendrick, M.D., LL.D., F.R.S. Including Histology by Philipp Stöhr, M.D. In two volumes. Vol. i. General Physiology. Glasgow: James Maclellan & Sons.
 Progres d'Organisation de L'Hygiene Publique en France. Pas la Dr. Henri Henrot, Professeur a L'Ecole de Medecine Mavi de Rheims. Rheims: Martot-Braine, 6, Rue du Cadran St. Pierre.
 Collective Essays in Preventive Medicine. By William Squire, M.D. London: J. & A. Churchill.

PERIODICALS RECEIVED.

AMERICAN:—

1. The Journal of the American Medical Association.
2. The Therapeutic Gazette.
3. Medical Register (Philadelphia).
4. New York Medical Journal.
5. Medical Record (New York).
6. The Medical Bulletin (Philadelphia).
7. New England Medical Monthly.
8. Medical Times (Philadelphia).
9. The Polyclinic (Philadelphia).
10. The Analectic.
11. The Medical Standard (Chicago).
12. The St. Louis Medical and Surgical Journal.
13. The Denver Medical Journal.
14. Annals of Gynecology (Boston).
15. The Medical News.
16. The American Lancet.
17. The Medical and Surgical Reporter.
18. The American Druggist.
19. The Western Medical and Surgical Reporter.
20. The South Western Medical Gazette (Louisville).

BRITISH:—

21. The Philanthropist.
22. The Practitioner.
23. The Medical Chronicle.
24. The Medical Press and Circular.
25. The Journal of Microscopy and Natural Science.
26. The Indian Medical Gazette.
27. The Australasian Medical Gazette.
28. The Hospital Gazette.
29. The Journal of Rhinology.
30. The Birmingham Medical Review.
31. The Ophthalmic Review.
32. The Pharmaceutical Journal.
33. Public Opinion.
34. Health.
35. The Chemist and Druggist.
36. The British and Colonial Druggist.
37. The Australasian Journal of Pharmacy.
38. The Nursing Record.
39. Diet and Hygiene.

FRENCH:—

40. Journal de Medecine de Paris.
41. L'Union Medicale.
42. Le Progrès Medical.
43. Bulletin Général de Thérapeutique.
44. Gazette de Gynecologie.
45. Gazette Hebdomadaire des Sciences Medicales.
46. Journal de L'Ouest.
47. Journal du Nord.
48. Revue Pratique d'Obstetrique et d'Hygiene de l'Enfance.
49. Annales de Gynæcologie et d'Obstetrique.

GERMAN:—

50. Centralblatt für Kinderheilkunde.
51. Centralblatt für Gynecologie.
52. Centralblatt für Chirurgie.
53. Illustrierte Monatschrift der Artzlichen Polytechnik.
54. Der Fortschritt.
55. Fortschritt der Medecin.

ITALIAN:—

56. Lo Sperimentale.
57. Rivista Italiana.
58. Rivista Internazionali di Medicina.

PORTUGUESE:—

59. A Medicina Contemporanea.

RUSSIAN:—

60. Vrach.

SPANISH:—

61. Rivista Clinica de Barcelona.

TURKEY:—

62. Revue Medico-Pharmaceutique (Constantinople).

The above journals have been regularly received. We shall feel obliged if editors of British and foreign journals will notify whether their journals have been sent.

Copies of Index for 1887 may be obtained at office, 10, Friar Lane, Leicester.

THE Provincial Medical Journal:

A MONTHLY REVIEW OF MEDICAL SCIENCE, LITERATURE, AND BIOGRAPHY.

VOL. VII.]

AUGUST 1, 1888.

[No. 80.]

Our Portrait Gallery.

THE LATE PROFESSOR S. B. F. DE CHAUMONT,
M.D., F.R.S.

By the lamented death of Professor de Chaumont, the Army Medical School, Netley, has been deprived of one of its most useful teachers, and sanitary science of one of its most earnest advocates. Of French extraction on his father's side, and Scotch on his mother's side, Professor de Chaumont inherited racial characteristics, which served him in good stead in the battle of life. He was born in Edinburgh in the year 1833, and received his education in the High School and at the University. After passing through the arts and medical classes with distinction, he obtained his degree with honours, and then entered the medical service in the army. He soon had an opportunity of seeing active service, as his regiment, the Rifle Brigade, was ordered to the Crimea—a school of suffering and experience from which he returned impressed with the dire effects of insanitation. On his return he was appointed Assistant Professor of Military Hygiene, under the veteran hygienist, the late Dr. Parkes.

His intercourse with Parkes continued during his life, and he assisted him in his laboratory work, and in the preparation of his lectures. His ability was recognised by the Government, for whom he did an immense amount of work in the way of analyses, reports on hospitals, barracks, and construction of military buildings. Though the Government valued his services, and utilised them, yet when Parkes died, and he was—with the unanimous approval of the profession—appointed his successor, they treated him very badly as regards the emoluments of his office, as they ignored his previous military service. Scientific merit—appreciated in the abstract—yet requires some more solid recognition.

Professor de Chaumont faithfully fulfilled the duties of his post; he edited two editions of Parkes's great work on

"Practical Hygiene;" inspected and reported on hospitals, barracks, and public buildings; gave addresses on health questions to various societies; took part in congresses at home and abroad, and was ever active in the great cause he had so much at heart—the spread of a knowledge of the laws of health in military and civil life. It is impossible to give a list of the numerous papers contributed by Professor de Chaumont in blue books, army medical reports, and in medical journals at home and abroad. In recognition of his services to science he was elected a Fellow of the Royal Society.

It has been truly said that the late Professor was *facile princeps* in his own department, and was acknowledged to be so throughout Europe, and in America more particularly. His scientific knowledge, far from being confined to his own branch, was large and accurate; he delighted in mathematical science, in which he excelled, and in which, if his other pressing duties and pursuits had permitted, he was capable of greatly distinguishing himself. He was an accomplished linguist, familiar with all modern languages, and a master of philology—a study very congenial to him. He delighted in music, and had a knowledge of its principles that would have been creditable to a professed musician, and was far beyond that of amateurs. If time had allowed, he would have excelled as an executant; as it was, some years ago, he could "attack" the compositions of the great masters on the piano in a manner not often attempted by amateurs. Like most men of great intellectual power, he had a Macaulay-like tenacity of memory; whatever he read he remembered, and stored in his mind with such order and method, that it was available with unflinching readiness at a moment's notice.

With all his acquirements he was the most modest of men; all his knowledge was at the service of his friends. He possessed a generous and equal temper, had not a trace of literary jealousy in his nature, and was a truly loyal colleague.

Original Communications.

LECTURES ON GYNÆCOLOGY.

II.

BY LAWSON TAIT, F.R.C.S.,

PROFESSOR OF GYNÆCOLOGY, QUEEN'S COLLEGE, BIRMINGHAM, ETC.

(Continued from page 291).

CHRONIC inflammation of the vaginal and vulvar mucous surfaces is most frequently the result of an incomplete cure of the acute stage of the disease. It may be safely said, that in unchaste women a chronic inflammation is almost as dangerous as the acute form. Sometimes, however, a chronic inflammation of the labia may be the result of mere inattention to cleanliness, and without any previous acute process. Whatever may be the history, the appearance and the treatment are the same. The inner surfaces of the labia are slightly swollen; the labia minora are red and somewhat tender, and if a speculum be carefully introduced into the vagina, the whole mucous surface will be found bathed in a copious, creamy, purulent discharge, and its usual smoothness disturbed by elevated papillæ, which bleed easily when touched. The speculum should not be used, however, if it can be avoided. This state of matters may have existed for years without having called for special attention. The history of several cases of vaginitis, which have come under my care, in perfectly pure women, seems to have been that the increased indulgence immediately after marriage has induced the relapse of an old gonorrhœa in the husband, which has of course extended to his wife. Under the impression that her suffering was only a part of her necessary experiences, the acute inflammation had been neglected, and it was only when continued sterility, or the more serious sufferings of chronic inflammation of the uterine appendages, induced the patient to seek relief, that the real state of matters was revealed. In the fortunate cases where the disease has not extended into the uterus it is easily remedied. Brushing the whole surface over with a mixture of equal parts of glycerine and carbolic acid, followed by the use of some simple astringent pessary, as acetate of lead or sulphate of zinc, will speedily effect a cure. In many cases this kind of chronic inflammation is the cause of sterility; and if the generative mechanism has received no permanent injury of the kinds to be afterwards referred to, the cure of the disease will remove the hindrance to impregnation. Those cases where the disease has passed within the uterus remain to be considered in another chapter.

There is a special form of chronic inflammation of the genital mucous surfaces in young girls which deserves close attention, not only from its intractable character, but from the disastrous mistakes to which it sometimes gives rise. This disease is generally classed under the strumous affections of childhood, though I really do not know why it should be so, for I have never been able to observe any close relationship between it and the ordinary indications of a strumous dyscrasy. There can be no doubt that it arises sometimes from the acute disease, which may be of catarrhal or of specific origin. I have never seen, so far as I can remember, a case of acute vulvo-vaginitis of catarrhal origin in a child; and I am thankful to say that I have seen very few of specific origin. These were of course due to the brutal conduct of such as do not deserve the name of men, but I believe offences of this kind to be more rare in this country than is supposed, for I have repeatedly been called upon to make

medico-legal examinations of children who asserted that men had assaulted them, but upon whom not the slightest evidence could be discovered in support of their statements. How they were able to give details such as I have heard, and which were absolutely incompatible with the facts, I do not know.

Upon this subject I venture to say to my professional brethren that no amount of care and caution should be spared. Within a few weeks of each other the following experiences occurred to me. A child aged about ten years charged her own father with having repeatedly had connection with her, the charge being given through some women who were probably desirous of doing the man some mischief. The child gave her evidence with such precision before the magistrate that it seemed as if there could be no doubt about it. The doctor who examined the child, a man of considerable experience, had, however, great doubt as to the possibility of her story, and he asked the magistrate for an independent examination of the genitals by myself. Without knowing anything of the case I answered the question as to the possibility of connection having been made with the child by an absolute denial. The genitals were perfectly intact and undisturbed. The charge was dismissed.

I happened to be waiting in an assize court, and was listening to a case where a man was charged with having committed a rape on a child. Two medical witnesses were called, one for the prosecution, and the other for the defence. One swore there were all the evidences of defloration, the other that the child was untouched, and unfortunately the judge was inclined to credit the former. He ordered an independent investigation which shewed that the child had never been in any way injured. I do not quote these cases to give my readers an impression that all such charges are trumped up, but to urge that the utmost caution should be used in investigating each case from its physical facts, and those only, and that it is always advisable in case of doubt to obtain the opinion of an expert.

But a few weeks ago the whole country was in a condition of excitement over the case of a girl, aged eleven, found drowned, and decided, most unfortunately, by a practitioner of medicine, to have been previously outraged. Nothing could be more horrible than such a story, but it was absolutely untrue. The police, with great skill and patience, unravelled the story, and found that this poor child was, and had been for a long time a juvenile prostitute who would receive ten or twelve boys in rotation, and that her drowning was purely accidental. The evidence was submitted to me, and I saw there could be no doubt that the medical man had inadvertently made a terrible mistake, the great trouble about which was the difficulty of disclosing the dreadful alternative story concerning the poor child. The authorities again managed this cleverly and save to themselves and to me (and of course to the doctor who really was the cause of all the excitement), the real story was never known.

The chronic vulvo-vaginitis of children usually has no history of an acute stage. It is generally discovered by the child evincing pain on micturition, being found manipulating the organs or by stains on the linen. Then the terrible idea that the child has been tampered with seizes upon the minds of the parents, and it is one of which they are not readily dispossessed. If closely watched, many of these children will be found to masturbate; but whether this habit is the cause or the consequence only of the disease, I am quite unable to say. In a few cases I think it is the cause.



*Yours sincerely,
F. de Chaumont -*

When the child is examined, the seat of the inflammation will be found to be almost solely the labia, majora, and minora, and the anterior surface of the hymen. The vagina is rarely involved. I believe that in a large number of cases it is due entirely to a want of cleanliness, to the collection of the natural secretion in the parts, and its subsequent decomposition. In a few it will be found to be due to the presence of ascarides in the rectum; and in one case I found it due to the presence of a piece of worsted-thread, which seemed to have been gathered from the carpet. I have had a case of chronic discharge from the vulva of a girl six years of age, due to a collection of pins, thread, and rubbish of various descriptions, which she asserted had been introduced by her companions, but which were undoubtedly put there by her own fingers. Sometimes, however, it does seem to depend on some constitutional condition, for it resists all treatment except removal to a more favourable climate. It is these cases, perhaps, which have earned for it the title of strumous. Usually it yields rapidly to a careful toilette, and the use of an ointment containing iodide or acetate of lead. Unless there are distinct traces of injury no countenance should be given to the fears of the mother that her child has been meddled with. Under such circumstances that must be established by non-medical evidence.

From what I have previously said, my readers may be sure that according to my own experience a real outrage upon a child is a very rare thing indeed. That indecent liberties are taken with children is, I am afraid, only too commonly the case, and that efforts may be made to outrage them, I am sure there is evidence enough to convince anyone. But in all the numerous cases of children that have been brought to me, under the suspicion that something wrong had been done to them, I have not in a single instance been able to satisfy myself that it was really the fact, although in three or four cases there had been grave suspicions. The subject of such an outrage would be of course free from the usual evidences of violence which affect matured women, because the child could not struggle, but any effort to effect entrance into the delicate tissues of the genitals of a child would leave such injuries that no mistake could be made if the examination were made within a week or ten days of the attempt. The fourchette of a child is extremely delicate in its structure, and easily torn, so that nothing like any effort at rape could be made without bearing effective evidence of its occurrence. The charge of such an offence is so horrible, and when made against an innocent man, involves such absolute ruin to him, even when he is discharged without any stain upon his character, that no kind of care can be too great to prevent such a catastrophe. On the other hand, no care would be enough to bring to condign and just punishment the brutes who engage in such practices. The steps to be taken which are most satisfactory on both sides are that an examination should be made of the child by at least two competent practitioners, one of whom shall be an expert either in children's diseases, or in diseases of women. The criminal law of England is, unfortunately, far too lax in all such cases in permitting either the discharge of guilty men, or the conviction of innocent men to be based upon the conviction of the nearest practitioner that may be picked up to make an investigation. It is just as reasonable to expect that a man who wears a diamond ring should be able to estimate the value of diamonds generally, because he happens occasionally to look at his own jewel, as to expect a practitioner, who inspects the vaginal orifice of a child or a woman probably

once in fifteen or thirty months, to give satisfactory and indubitable testimony upon the question of deflorescence either in a child or a grown woman.

It is natural enough to any woman to suppose under suspicious circumstances that her child has been improperly behaved to, but the rule ought to be to do everything to assuage that fear, and not to excite suspicions in the other direction as I have seen too often done in my experience in criminal investigations. For as there are women vile enough to sell their children for improper purposes, so there are others of the same type who will seize upon any slight train of circumstances to make a plunder out of the possibility of a rape.

DENTAL CARIES AND EVOLUTION.

By A. W. MARTIN, L.R.C.P., L.R.C.S. ED.,

MEDICAL OFFICER OF HEALTH, GORTON.

THE many theories advanced to account for the rapid decay of the teeth in the present generation seems to imply that the special cause has not been definitely ascertained. The most generally accepted theory is that chemical products developed in the mouth, and microbes, are the principal agents in bringing about the disease. In the *Provincial Medical Journal* of November, 1887, in an abstract on "Care of the Teeth," the following paragraphs occur:—"If the necessary care were taken from the time of birth, without discontinuing it during infancy and during adolescence, adults would have sound teeth; unfortunately parents do not attach much importance to primary dentition, and carious teeth are disregarded." "Miller believes that the first stage of dental caries is caused by the decalcification of the tissue of the tooth, the chemical result of acids produced by fermentation in the mouth, but the second stage is produced by micro-organisms." "Miller has recognised five kinds of microbes, but there is one specially responsible for the caries, and he has tested this on sound teeth." In Quain's *Dictionary of Medicine* the following occurs in the article on teeth:—"Caries of the teeth is by a great deal the most common pathological change to which the human body is liable. It generally affects some of the temporary teeth before they are shed, and there are very few adults indeed in whose teeth caries, in some degree, is not to be found. Dental caries is a softening and disintegration of the tooth's surface, gradually penetrating towards its centre. It is essentially a superficial affection, dependent on external influences. These are chiefly chemical, though partly mechanical, and it is not improbable that the action of a vegetable parasite (*leptothrix buccalis*) has some share in the process. One of the most remarkable circumstances in this pathological change is that though the dentine of the tooth undergoes, through disease, a radical change in physical characters and chemical composition, it long retains its vitality, and even becomes increasingly sensitive. The idea that death of the tissue antecedes caries is quite erroneous. The most obvious commencement of caries takes place on the surface of the dentine immediately underlying faulty enamel, but in some instances it commences in the enamel itself." "The real causes of dental caries are as yet involved in much obscurity." In Dr. Druitt's *Surgeon's Vade Mecum* (12th edition) we read under "Caries of the Teeth":—"This begins especially in the furrows in the crown of molars, and where teeth press closely on each other. In both places the enamel is not unfrequently either absent, thin, or imperfectly calcified.

Not uncommonly fissures are found elsewhere in enamel. The first sign of decay is opacity of the enamel at one of these spots, then it becomes brownish, friable, and disappears, exposing the dentine, which becomes still more widely brown, and more or less rapidly decalcified. On the surface of the pulp cavity, new dentine may be laid down over the carious focus. Sooner or later ulceration gains the mastery, and the pulp is exposed. The whole tooth may thus be destroyed. At a carious point the dentine tubules are varicose and filled with micrococci, as one would expect in the mouth. The etiology is complex. Developmental defect is evidently very important, from the frequency with which bad teeth are found running in otherwise healthy families. The effect of rickets on the milk teeth, and of congenital syphilis on both sets, is very marked, as also that of general ill-health during the development of teeth. Next, caries begins commonly during pregnancy, nursing, or after serious illness, though how these act is uncertain. The effect of softening acids, even used as drugs upon enamel, the common association of dyspepsia with bad teeth, the frequency with which caries starts between teeth, or where teeth overlapped by gum, and where, consequently, food is often retained for long periods, and the fact that dead teeth used as artificial ones may undergo caries, strongly suggest the view that acids developed in the mouth cause softening of the enamel, and naturally they act chiefly where it is thinnest, or, still better, upon exposed dentine. Once cocci gain access to the tubules of the latter, the products of their action doubtless assist largely in causing decalcification."

In an article contributed to another medical journal a few weeks since, blame was laid on the excessive drinking of tea of the present time, as producing not only dyspepsia but also as the direct cause of the decay of teeth.

Many other supposed causes might be named, held more or less by the public, such as the use of vinegar with food, the large amount of sugar consumed both by children and adults in different forms, drinking hot fluids, drinking cold fluids, the deficiency of lime salts in drinking-water in certain localities, the disuse of brown bread, and the general substitution of white bread in which the bran is left out, "the bone-making constituent of the flour." Also, vaccination has not been left out, as it has been observed that caries is very much more frequent in those countries where vaccination is more or less compulsory.

The following is an article contributed to the *National Encyclopædia*:—"A curious and very rapid alteration of the shape of the human jaw is now taking place in England. In the memory of the present generation of dentists, the normal shape of the jaw has changed from a curve approaching a semicircle to one of the character of a Gothic arch, the hardness of the teeth at the same time being marked by degeneration. Large investigation show these to be the typical modes of development of the "educated jaw," and indeed the contrast with the wide row of hard grinning ivories presented by the merry negro, with the almost rabbit-like prominence of the two incisors, and the weak and badly nourished teeth in the mouths of children of cultured ancestry, is so marked as inevitably to strike the attention of the most careless observer." "Caries of the teeth is a very common affection from which indeed few persons altogether escape—the causes of this complaint are rather obscure."

The points which strike one most forcibly are, the alteration in the shape and size of the jaw taking place in civilised countries, more particularly during the last half

century, and a degeneration in the structure of the teeth, rendering them less able to withstand the action of certain external substances, such as fermentation products, acids, etc., the caries once started being probably increased by the action of microbes. From the fact of such changes in teeth being confined to inhabitants of civilised countries, it is evident that the cause must be traced to something operating in these countries, but which is absent more or less amongst savages, dental caries being unknown, or almost so, amongst them.

In seeking for such a difference, it is necessary to bear in mind the function of the teeth and their importance in the animal economy. "Their most important function is mastication, by which food is comminuted and at the same time insalivated, two essential preliminaries to digestion. The loss of teeth is with many of the lower animals the limit of life, from the cessation of these processes." It scarcely requires mentioning that the teeth of all animals, young and old, man included, are subject to the diseases common to similar structures in the body, and amongst the diseases to which bones are liable is atrophy in its various forms.

"Wasting of any part of the body during life, when not physiological, usually depends either upon some interference with the blood supply or some disturbance of innervation, but to these must be added, in the case of organs which have an active and continuous function, disuse or overstimulation. Disuse produces atrophy only in organs whose functions are active and constant, such as nerves and muscles." "A cessation of function from whatever cause is manifestly and invariably followed by wasting of the organ in which the function had its seat; from the complete and long continued cessation of action the substance of organs is sometimes almost entirely removed, nothing remaining by which the original structure can be distinguished."

A complete cessation of function leads to effects manifested in the lifetime of an individual, whereas diminished functional activity takes a much longer time and spreads over several generations before the effects are sufficient to produce any great structural change. At first sight it may appear strange to associate dental caries with atrophy of bone, but on examining more closely into the function of the teeth, it is evident that their work is solely the crushing and mastication of hard substances forming part of the food of animals, and if that work is accomplished either wholly or partly by any other means, then there is a cessation, more or less, of their particular function, for food in a more or less soft condition certainly does not necessitate the use of such hard instruments as the teeth are in their natural condition for its mastication and insalivation. The conclusion seems forced upon us that the cause of dental caries is atrophy of the bone structure, simple and degenerative, brought about by diminished functional activity through the habit of cooking and softening the food in civilised countries, the atrophy of the teeth differing from atrophy of other bones of the body only so far as they differ from them in composition, structure, situation, and function. Atrophy and degeneration of bone from disuse or diminished use in any other part of the body does not lead to caries in the same way, in consequence of being protected from external irritating influences, through being enclosed in muscle, skin, etc. We have an example in the digits of the four outer toes undergoing atrophy from pressure and disuse, yet giving us no trouble like the teeth. "The last two phalanges of

the little toe are generally ankylosed in adults, in consequence of being cramped by tight shoes, so different from that free spreading of the toes which nature intended." The teeth, however, are not so protected, and as soon as degeneration of their structure has advanced ever so little, they become less able to withstand external influences, chemical and mechanical, met with in the mouth. "The idea that death of the tissue antecedes caries is quite erroneous, the most obvious commencement of caries takes place on the surface immediately underlying faulty enamel, but in some instances it commences in the enamel itself."

It is not now difficult to see why the disease should be almost wholly confined to civilised countries, cookery being in a very rudimentary state in uncivilised countries compared to Western Europe. It is in the memory of the present generation of dentists, however, that "the curious and very rapid alteration in the shape of the jaw commenced to take place, the shape of the jaw changing from a curve approaching a semicircle to one of the character of a gothic arch, the hardness of the teeth at the same time being marked by degeneration." The jaw as well as the teeth is thus seen to be undergoing the same process of simple atrophy, or degenerative atrophy as the case may be, but we are scarcely cognisant of the fact, not suffering in the same way as from the teeth, through the jaw bones being protected from external influences, chemical or mechanical, in the mouth. It is brought to notice in those cases where the teeth are crowded together, there being insufficient room in the jaw for them to develop fully, the jaw in such cases having diminished in size at a greater ratio than what has taken place in the teeth. In saying that the jaw or teeth have diminished in size, it is not meant that the change is confined to the individual, but to the race, the tendency being transmitted from parent to child. Up to the early part of this century the food of the working classes was very much coarser than at present, the bread particularly being coarse and hard, through the high price of corn, the wheat flour generally being mixed with rye and barley flour, causing the bread to be very much harder, and giving to the teeth their full and proper work to perform. The repeal of the Corn Laws, in giving a free, constant, and cheap supply of wheat to the country, has thus, strangely, been one of the chief factors in increasing dental caries and its consequences. The perfection to which flour is brought by machinery, and the light spongy bread, "the staff of life," of to-day, is a great contrast to that of half a century ago, and still more so to that of a hundred or a hundred and fifty years beyond, when the quern or grinding-mill was a household requisite. If the caries were due to a deficiency of some of the constituents in our food necessary for bone structure, the effects would not have been confined to the teeth, but would have been manifested in other bones of the body, as is frequently seen in certain diseases, and from malnutrition.

Several notices have appeared during the last year or two of dental caries in the horse, the same treatment being adopted for its arrest as in the human subject; or, when gone too far, the tooth being extracted and an artificial one substituted. The method of crushing, chopping, cutting, and softening the food of the horse, will undoubtedly lead in time to a condition of dental caries in that animal similar to what we are now suffering from, and brought about by the same cause. Examples are not wanting in natural history of animals having entirely lost all or some of their teeth, due to altered habits, the result

of either their surroundings being changed, and thus necessitating a changed mode of life, or having preferred some particular habit of life to the one their ancestors had been accustomed to lead. "With the complete and long continued cessation of action, the substance of organs is sometimes almost entirely removed, nothing remaining by which its original structure can be distinguished." Several examples are met with amongst the *Cetacea* and *Sirenia*. "The *balenidæ* or toothless whales are characterised by the total absence of teeth in the adult. Teeth are however present in the foetal whale, but they never cut the gum. The place of teeth is supplied by a number of plates of whalebone or 'baleen' attached to the palate, hence the name of 'whalebones' often given to this family. . . . The whale is a strictly carnivorous or zoophagous animal, but owing to the absence of teeth, and the comparatively small calibre of the oesophagus, it lives upon very diminutive animals. The whale in fact lives mostly upon the shoals of small pteropodous molluscs, crustacea, ctenophora, and medusæ, which swarm in the arctic seas. . . . The *manatees* are characterised by the possession of numerous broad molars, which are never all in use at one time, while there are two small upper incisors which do not cut the gum. . . . In the *Rhytina Stelleri*, which is now extinct, having been exterminated by man within a comparatively recent period, there can hardly be said to have been any true teeth, but the jaws contained large lamelliform fibrous structures which officiated as teeth, and may be looked upon as molars. These singular structures are not teeth in the true sense of this term, but they are similar to the horny tuberculated plates found in the front of the mouth of the dugong and manatee, and the upper ones may be regarded as the equivalent of the anterior palatine pad of the ruminants. . . . As regards the distribution in time of the *Sirenia*, the oldest known remains referable to the order are found in the Eocene tertiary (*Eotherium*). Of the same age is probably the interesting form described from the tertiary deposits of Jamaica, by Owen, under the name of *prorastomus sirenoides*. This type is remarkable as possessing upper and lower canines, in addition to molar and incisor teeth. The miocene and pliocene deposits of Europe have yielded remains of numerous sirenians, belonging to the genus *Halithrium*, in which there are tusk-like upper incisors combined with enamelled molars."

The ruminants also afford examples in having lost their upper incisors and canines, their place being taken by a hard callous pad, against which the lower incisors impinge. The stomach of the cetacean as well as the ruminant is complex. "In birds the function of mastication is performed by the stomach, the gizzard receiving the stored and soaked contents of the crop, and grinding them between its powerful muscular walls with their dense horny epithelium, aided too by small stony particles which the bird takes care to swallow from time to time." If the teeth then are eased of their work, mastication has to be accomplished more or less by other means—in man by the art of cookery, in animals by a more elaborate construction of the stomach.

It has been mentioned above that the bones of the outer toes are undergoing atrophy, from pressure and disuse. From that fact we have recently been told that they will ultimately disappear, the foot becoming somewhat longer, and presenting much the same appearance as if the toes

¹ Nicholson's "Manual of Zoology."

were amputated and the parts healed. But the toes retain their position on the feet, not so much because of their usefulness or necessity, but by being homologous with the fingers, and structures thus correlated frequently persist long after there is the slightest use for them—such as the nails on the toes correlated with those on the fingers, and the hair in the axilla with that in the groin.

The nose too is to disappear from the human face in the future it is stated, the sensation of smell becoming less a necessity to us with civilisation. If the function of the nose were primarily that of smell, there might indeed be great danger of such a removal gradually taking place; but its use is more in connection with the respiratory organs, to warm the inspired air, the neglect of which is doubtless the cause of death of thousands yearly, judging by the high number which diseases of the respiratory organs bear to the other causes of death. The olfactory nerves would naturally develop in the passages of the proper air-current, whether that had been the mouth or the nose.

The causes of lingering labour scarcely come within the scope of this article for discussion; yet the chief factor in it, malformations excluded, is another instance of atrophy from pressure and disuse, the wearing of stays or corsets from girlhood upwards having a most harmful effect upon the abdominal muscles, and causing them to decrease in size and become weaker. All medical practitioners and mothers know the importance of the action of these muscles in aiding the uterus to expel its contents in the bearing-down pains.¹ So atrophied and weak are they becoming with each successive generation of women, as to be of little help in such times, and recourse to instrumental delivery is becoming more common year by year. Its effects are observed more in towns than country districts, and in uncivilised lands we are told parturition has but few of the terrors and pains we are accustomed to observe here.

To return to the subject of the teeth, judging by analogies in the lower animals, they will in time be supplanted by a hardened condition of the gums, or by hard callous pads, to assist in the mastication of soft food and its insalivation. The power of "adaptation to environment" still seems as active in the present time as it has been in the past in "The Descent of Man."

FROM GENERATION TO GENERATION: A PRELUDE TO THE STUDY OF HEREDITY.

By R. A. DOUGLAS LITHGOW, LL.D., M.R.C.P. ED., F.S.A.,
F.R.S.L., ETC.

(Continued from p. 309.)

I HAVE still, however, to consider the third division of the acute infectious diseases—viz., those which may be said to be *miasmatic-contagious*, which, as they cannot be conveyed from diseased to healthy individuals by mere contact, are not contagious according to the significance of the term, and on the other hand, the poison has the characteristic peculiarity of the miasmatic diseases in being, in the first instance, drawn from an external source; but, differing from them in the fact that "the poison only originates outside the body when an affected body has furnished the germs." This division includes typhoid fever, cholera, dysentery, yellow fever, the plague, dengue, miliary fever, influenza, hay fever, epidemic cerebro-spinal meningitis, and, perhaps

whooping cough; and the mode of extension of these diseases is so far understood as to enable us to state with certainty that they can neither be reckoned among the contagious nor among the miasmatic diseases according to the following definition: *Contagium* has been defined as a specific excitant of disease, which originates in the organism suffering from the specific disease; while *miasm*, on the other hand, is the term used to denominate a specific excitant of disease, which propagates itself outside of, and disconnected from, a previously diseased organism. Contagium can be conveyed by contact from a diseased person to a sound one, produce the disease in him, and then again reproduce itself. Miasm originates from without; taken up into the body, it can call a specific disease into action, but it cannot spread the disease any further by conveying it from a diseased to a sound person.¹ Seeing then that the diseases just enumerated are neither contagious nor miasmatic according to the above definition, while possessing some of the characteristics of both, it seems but right to include them in a third group, to which the name *miasmatic-contagious* has been given, which, moreover, they have held for a considerable period, though usually in another sense. As in the two previous divisions, and for similar reasons, we can trace no potential causative agency to the influence of heredity in this one, apart from the fact that the protophytic fungi, some of which have been identified as the *fons et origo mali* of other diseases, are so far influenced by heredity as to always propagate themselves after their kind, each preserving its own characteristic individuality, so that, as Tyndall observes, from their respective viruses you may plant scarlet fever, typhoid fever, small pox, *et hoc genus omne*; that as surely as a thistle rises from a thistle seed, as surely as the fig comes from the fig, the grape from the grape, the thorn from the thorn, so surely does the typhoid virus increase and multiply into typhoid fever, and nothing else; the scarlatina virus into scarlatina, and into nothing else; the small-pox virus into small-pox, and nothing else; so that to all intents and purposes a virus may be regarded as a seed which invariably generates after its own kind. And there we see the all-pervading influence of heredity that necessitates its recognition as an universal law, for as in the highest forms of organic life, from man himself down through the lower animals, until we reach the lowest forms of all, there heredity manifests itself in the reproduction of each after its kind.

As in the two other groups of acute infectious diseases, we find heredity acting similarly in this division—viz., with regard to predisposition and insusceptibility. It may, indeed, be asserted as an axiom that individual predisposition plays an important rôle not only in all epidemics, but in all cases, and it may also be stated that this predisposition, while differing in development in different individuals, is, if not more, at least equally, potent to all predisposing causes of an external character. Let me take cholera as an illustration. It is a well-known fact that many persons enjoy at least a temporary immunity against the disease. During an epidemic of cholera should choleraic diarrhoea prevail, many escape it entirely, others suffer only lightly and temporarily, while others again, notwithstanding the employment of all sorts of therapeutical and hygienic measures, are subject to continued and repeated attacks (Lebert). Thus, again, with typhoid fever, the poison of which, as established by Budd, is propagated continuously, and never originates antochthonously, and which can only germinate in a suitable soil. Such

¹ "Involuntary or uterine force, 3.4 lbs. to the square inch; Voluntary or abdominal force, 38.6 lbs. to the square inch."—*Meadows' Midwifery*, p. 184.

¹ Liebermeister.

disease germs pass into each one of us every day of our lives, why, then, do they not manifest their specific effects? And why, even when they do germinate, does the product vary? Because, in the first instance, they must become implanted in a suitable soil, or they produce no effect, and secondly, because when they do germinate the product varies with the soil. Thus while some may be peculiarly predisposed to the action of some of those specific germs, others will be found more or less insusceptible, and that this predisposition or insusceptibility frequently amounts to a constitutional peculiarity, in the production of which heredity has had a share, it is only fair to assume. As regards the differentiation of individuals in relation to the respective tissue-peculiarities which they have inherited and acquired, I cannot do better than again quote the words of Sir James Paget, who says: "This living soil is in each as personal and distinct as any other constituent of personal character, and the study of it must be intimately personal, with an exact analysis of every disposition to disease." How this predisposition or insusceptibility is produced, or in what it consists we do not know; we can only accept the facts; but giving full force to every possible factor of an external kind, and, in the cases of insusceptibility, to the comparative immunity produced by previous or primary attacks, there still remains a far greater amount of evidence as to the efficacy of individual predisposition and insusceptibility, the result of breeding, and, therefore, of inheritance. By this I do not mean that the parents or ancestors must necessarily have undergone attacks of acute infectious diseases, or that they possessed a similar predisposition or insusceptibility towards them, but that *somehow* these predispositions and insusceptibilities have appeared as constitutional peculiarities, and that they have constituted a life-heritage just as much as any other constitutional peculiarity which they may have obviously inherited.

Heredity preserves the race by varying the individual, and the law of variability, known only by its effects, is responsible for this individual differentiation; but how these effects are produced we cannot tell, for "as one star differeth from another," so does every individual, not only in what he acquires, but still more in what he inherits, and further we cannot go. It is therefore unnecessary that I should go into any detail in considering the remaining affections in this group—viz., dysentery, yellow fever, the plague, dengue, miliary fever, influenza, hay fever (undoubtedly hereditary), epidemic cerebro-spinal meningitis, and whooping-cough. That they are all produced by external causes introduced into the system is an admitted fact, but that, in relation to each one of them, some individuals are particularly predisposed, while others are comparatively insusceptible must also be admitted. That both this predisposition and insusceptibility may be inherited, *i.e.*, the result of inheritance, using the term in its broadest signification, admits but of little doubt, and this is all I contend for. For although the effects of the acute specific or infectious diseases leave no trace in the affected tissues that can be transmitted to any extent, yet it must be conceded that far beyond the agency of external circumstances, and the relative immunity produced by primary attacks, these predispositions and insusceptibilities often amount to constitutional peculiarities in which, somehow, heredity must have had a share in producing. If they appear to be the result of variability, it must be remembered that variability is necessitated by evolution, and without heredity, evolution, nay, life and varia-

tion are impossible; for "evolution produces physiological and psychological modifications; habit fixes them in the individual, heredity fixes them in the race," so that heredity and variability act and interact inseparably through the universal kingdom of organic life and being. Thus alike in races, families, and individuals, does heredity assert itself, and thus are races, families, and individuals, preserved and perpetuated, differentiated and destroyed by heredity and variability, and as in health, so likewise in disease.

I have still, however, to consider the *diseases of the organs of special sense*, and also those of *the skin*. To some of the former I have already alluded in an earlier portion of these papers, when discussing the heredity of sensorial qualities, but as this allusion was from the psychological stand-point, I may now be permitted to refer more particularly to the same, only from a pathological point of view. I then showed that besides those varieties of vision depending upon mechanical causes, those also depending upon anæsthesia or hyperæsthesia of the nervous element were all hereditarily transmissible. Of those dependent upon mechanical causes, strabismus, myopia, and presbyopia are the most common, and these are all markedly hereditary. Portal describes the Montmorency sight—an imperfect form of strabismus which distinguished nearly all the members of that family. Stahl also relates the following remarkable case. A soldier lost in war one of his eyes. He returned to his country and married; his wife bore him a son, one of whose eyes was quite dried up, so that he was monocular like his father! Congenital blindness may run in families, and blind persons will sometimes beget blind children. A blind beggar was the father of four sons and a daughter, all blind. Dufau, in his work on blindness, cites the cases of twenty-one persons blind from birth, or soon after, whose ancestors—father, mother, grandparents, and uncles—had some serious affection of the eyes.¹ While amaurosis, nyctalopia, and cataract in the parents may become blindness in the children, they are each transmissible, and hereditary amaurosis, although not perhaps so frequently transmitted as the other two affections, is yet by no means unknown. Cataract is very frequently inherited, and Carus quotes from Lusardi a case where the children of a man who suffered from cataract were all born with this disease. A remarkable case of inherited nyctalopia, which has been strictly investigated from official documents, and described by Cunier in a pamphlet, may here be quoted. It is shown in this little work that nyctalopia had been propagated during centuries in the same family, from one generation to another, and that of 600 descendants of one ancestor, a great number were afflicted with this evil, so that the same is spread over Vendémian and some other neighbouring places through this family alone. There exists no example of the evil ever having befallen a member of this family where both parents were free of it; whenever a child was afflicted with it, then surely either his father or his mother had had the same complaint. It is further proved that the complaint was, in the greater number of cases, inherited from the father.²

In addition to those affections of the visual apparatus depending upon mechanical causes, and those abnormalities of vision, whether of the nature of anæsthesia or hyperæsthesia—and which are all, in every degree, hereditary—there can be no doubt that the majority of cases involving the eyelids are also hereditarily transmissible, or at least that a predisposition to them is very frequently transmitted from

¹ Ribot.² Steinau.

parents to children. To this latter class belong epicanthus, ptosis, entropion, ectropion, trichiasis, hordeolum, ophthalmia tarsi, cysts, warts, and nævi. There is, in fact, no form of ocular abnormality, whether visual or palpebral, which may not be inherited, or to which a predisposition may not be transmitted.

With regard to morbid affections of the ear, as in the case of the eye, they may consist of either anæsthetic or hyperæsthetic peculiarities, and these may equally be transmitted. I have already discussed the heredity of deaf-muteness, and would here only remark that it should be remembered that in those cases in which deaf-muteness is not inherited, it may be transformed into an infirmity of some other kind, as hardness of hearing, obtuseness of the mental faculties, or even idiocy (Ribot). How these transformations occur I have already alluded to in previous pages; moreover, in those cases of musical talent where "a good ear" is essential, the musical aptness necessarily depends upon the heredity of certain qualities of hearing. Of those affections of the ear which are perhaps most frequently inherited, I may mention cophosis nervosa. My accomplished friend Dr. Macnaughton Jones, who is generally considered an authority on every subject upon which he writes, says, in the last edition of his excellent *Practitioner's Handbook of the Diseases of the Ear and Naso-pharynx*—"That deafness is one of those ailments which nature entails as a hereditary reminder of parental imperfection is well known, and in it frequently we have a good exemplification of the law of atavism; the defect appears to skip one generation, and to re-appear in the next.

I have just at present a lady under my care who is very deaf, and whose mind is beginning to fail. She is one of a family two other members of which are deaf. Deafness has been transmitted for generations; and, coincident with the deafness, there is also a family history of insanity.

Occasionally, though we cannot find evidence of deafness in the parents, curiously enough two or three brothers or sisters are affected. The deafness at other times will be found on the father's or mother's side, while the parents have escaped. Such hereditary deafness is nearly always of a most unfavourable type, and treatment generally ends in a negative result. In a great many cases the physician does not see the patient until the deafness is far advanced and there is evidence of serious middle and internal ear trouble.

It is a fact, and a most vital one in regard to this form of deafness, that we frequently find it first make its appearance after puberty, or even later on." Thus, hearing, of every form and variety, whether of the nature of anæsthesia or hyperæsthesia, may have an element of heredity in its production, which may have become decreased, intensified, or otherwise modified, in its descent from one generation to another.

With regard to heritable peculiarities of touch, I have already referred to them when discussing the heredity of the sensorial qualities. There can be no doubt that parents transmit to their children the most singular perfections and imperfections of touch; and all these tactile sensations, as hardness, softness, elasticity, etc., and sensations of temperature, as of heat and cold, are alike subject to, and governed by, the law of heredity. The relative sensibility of different families to tickling is well known; in fact, every form of anæsthesia or hyperæsthesia of the skin is markedly hereditary. All this, however, is more physiological than pathological; but with regard to the latter I may mention cases

related by Lucas, which illustrate how the sense of touch, when exaggerated or neutralised, may affect pathological conditions, and how abnormal sensitiveness to heat or cold may be transmitted. A woman whose tactile sensibility was so exalted that for her the slightest hurt was an agony, married a man endowed in the highest degree with the opposite quality. He did not lack intelligence, but his heart and his skin were impassible. A daughter was born to them, and she is as insensible to external pain as her father himself. We have seen her endure, without complaint, and even without appearing to notice it, pain which would have been very acute for ourselves.

A family from the south, says the same author, who was acquainted with the persons, came to Paris some time ago. Several of the children were born in Paris; but those born there, as well as those brought there from the south, were in childhood extremely sensitive to cold. One of the daughters married a man from the north, who is insensible to cold, provided it is not excessive. The child born of this union is more sensitive to cold than even its mother; like her, he shivers at the slightest fall of temperature, and so soon as the air becomes cold, he is afraid of leaving the house. The insurmountable repulsion which some persons have for touching certain objects: as silk, velvet, mother-of-pearl, cork, peaches, etc., is well-known, and cases might easily be cited showing how these repulsions were frequently, if not generally, hereditary. Although, therefore, the sense of touch concerns physiology rather than pathology, there can be no question that in the one as in the other, heredity governs all the phenomena.

The senses of taste and smell are so allied as to be almost inseparable. Like the sense of touch, these latter ones concern also physiology rather than pathology, but where the phenomena are permanently involved in pathological conditions, then heredity is the rule, as in those which are purely physiological. The specific, as well as the individual varieties of taste and smell, are alike transmissible. I have elsewhere referred to the physiological phenomena, which are undoubtedly hereditary; but, for obvious reasons, beyond the fact that every form and variety of the sensorial development of smell and taste, whether congenital absence, anæsthesia or hyperæsthesia, in every degree, are subject to heredity, I cannot go. Purely pathological conditions of the senses of smell and taste are so generally, merely of a temporary character, that they cannot be regarded as transmissible, but in everything appertaining to the development and degree of the senses themselves, heredity is distinctly apparent, as indeed it would inevitably be pathologically, if their functions required the exercise of special local organs, as in the case of sight and hearing; or if, in like manner, they were subject to characteristic and definite diseases.

From the foregoing observations it will be seen that in relation to the sensorial qualities, heredity plays its part, and exercises its influence, not only physiologically but pathologically also. With regard to sight and hearing, we have seen that not only the visual and acoustic abnormalities and diseases are transmissible, but that, in the case of touch, smell, and taste, every degree of development, whether anæsthetic or hyperæsthetic, is alike transmissible, and that wherever these latter abnormalities become developed to a morbid degree, here also heredity is the rule. In a word the sensorial organs, their functions and their diseases, are alike subject to the law of heredity.

(To be continued.)

THE CORONER'S COURT FROM THE MEDICAL STANDPOINT.¹

PART II.

BY JOHN EATON, M.D.

(Continued from page 300.)

In the course of this paper we have stated pretty fully the practice of the Coroner's Court in England, and the same law applies to Wales. The practice in Ireland is pretty much the same, except that the coroners there are not so liberally dealt with. This is clearly shown by the following facts from a paragraph in the *British Medical Journal*, vol. i., 1879, p. 243: "During the first week of February, 1879, a deputation waited on the Chief Secretary for Ireland, to bring under his notice certain grievances which coroners in Ireland were anxious to have removed. It was sought to have the law in England relating to coroners introduced into Ireland. Irish coroners only received £1 10s. per inquest, although the inquiry continued several days, and they desired instead to have fixed salaries beginning at a minimum of £100 per annum, and increasing in proportion to the amount of the duty performed. They desired power to appoint a deputy with the approval of the Lord Chancellor, the salary of the deputy to be paid by the coroner. They desired an increase of the sum allowed for mileage (the coroners of boroughs in England are allowed ninepence for every mile, exceeding two miles, which they are compelled to travel), and retiring allowances of two-thirds of their salary at the age of sixty, provided they have had twenty-one years' service, and full salary on attaining the age of seventy, with twenty-one years' service."

And the present unsatisfactory condition of the law relating to coroners in Ireland is also indicated by the following extracts from the recommendations of the Council of the Irish Medical Association regarding The Coroners' (Ireland) Bill, 1875 (*British Medical Journal*, vol. i., 1875, p. 620).

1. The coroner to employ the practitioner who has attended the diseased, or if no one has been in attendance, to employ the dispensary surgeon of the district in which the death occurred, or in which the body has been found. When deaths occur in hospitals or public institutions, the surgeons of those institutions to be employed and paid by the coroner. Any medical practitioner, however, who may be implicated in the death not to be allowed to perform or assist at the *post-mortem* examination.

2. The medical witness to be entitled to a fee of one guinea for each inquest or adjourned inquest, with sixpence per mile to and from his residence, and the place where the inquest or adjourned inquest is held.

3. An additional fee of two guineas to be allowed for making a *post-mortem* examination by direction of the coroner. When a *post-mortem* is necessarily difficult and prolonged, coroner to have power to allow a fee not exceeding five guineas; and where the coroner may deem a chemical analysis of the viscera of any dead body necessary, he shall pay a fee of five guineas to the qualified practitioner selected by him and the majority of the jury for making such analysis.

4. A legally qualified medical practitioner, if summoned, though his evidence be not taken, and the inquest be deemed unnecessary, is to receive a fee of one guinea with the travelling allowance.

5. No person to be qualified to act as medical witness, or to make a *post-mortem* examination at any inquest, unless he be a legally qualified and registered medical practitioner.

6. Immediately after the inquest, coroner to pay the medical witness his fees and travelling allowance.

The method of inquiry into violent obscure or suspicious deaths in Scotland is different from the procedure in such cases in England, and from the experience which I had of it fifteen to twenty years ago, and subsequent consideration of the subject, I am of opinion that the method now practised in Scotland is preferable, and that chiefly because never fewer than two medical men are employed when a *post-mortem* examination is required. Coroners or "Crowners" are mentioned in many old Scotch Statutes, but the office was either abolished or fell into disuse in Scotland, probably in consequence of the Succession War and the French connection, and now the duties of a coroner as well as of a public prosecutor in criminal cases, occurring within his district, are performed by a Crown official, styled the procurator fiscal, who is usually a Scottish legal practitioner of some standing and consequence. For counties he is appointed by the sheriff of the county, and in cities or towns by the magistrates. All the inquests and examinations of the procurator fiscal are in the first instance conducted privately, whether the case is apparently or obviously criminal; or is an inquiry regarding a sudden death, a death from accident, or under suspicious circumstances; and thus, if there is no crime, the party last seen with the deceased is not exposed or injured by the publicity of the inquest, or the publication of the details in the press, as he is in England. This private method of inquiry, it is only fair to state, has, however, been objected to, as tending (it is alleged) to permit the hiding or huddling up of that which should be fully known, as, for example, the cause of catastrophes attended with loss of life.

I have met with a case where a gentleman, under the strong provocation of having nicknames called after him by a number of boys, levelled his gun, which was loaded with very small shot, and fired and wounded a boy above the eye, and the inquiry was never heard of beyond the procurator fiscal's chambers; but it has also been alleged that the coroner sometimes makes a job of his office, trumping up cases, and holding inquests which from the first were obviously unnecessary, and even acts sometimes vexatiously at variance with the warrants of magistrates, but both these instances are doubtless rare and exceptional. Whenever the procurator fiscal has reason to believe that a crime has been committed, he has to apply for a warrant of arrest, or to summon the alleged criminal before the sheriff. Witnesses are then cited and precognosced, and the procurator fiscal sends a copy of their evidence to the Crown Counsel in Edinburgh, of which the Lord Advocate is chief, and if they think the evidence sufficient, the case proceeds to trial, but not otherwise. When the procurator fiscal is informed of a crime, with what appears to him doubtful evidence, he merely gives his concurrence to the party who suggests it, and does not himself initiate proceedings. Procurator fiscals are now paid by salaries according to the population of their district, and have a code of instructions drawn up by the Lord Advocate for their guidance. Whenever a *post-mortem* examination is deemed necessary two medical men are always employed, and are required to present a written report of the examination, with their opinion, to the procurator fiscal, the report to be signed by both.

¹ Read before the West Cumberland Medical Society, at Whitehaven, July 27th, 1887.

The French system of inquiring regarding mysterious or suspicious deaths is somewhat analogous to that practised in Scotland, and the system in Greece is almost identical with that in France. From two articles in the *British Medical Journal* for January 14th and 21st, 1882, which were confessedly founded on an address delivered by Mr. Clark Bell (first President of the Medico-Legal Society of New York) before the Medical Society of the State of New York, and entitled "Proposed Reforms in the Coroner's Office," we learn that. . . . In France the Procureur or Attorney of the Republic performs the duty of the English coroner, and also acts as a local public prosecutor. He is a lawyer, is responsible for the case as a legal inquiry, and for all legal questions involved, and is more directly responsible to the higher executive than the English coroner. He is always assisted in all medical questions involved by the medical assessor, who has been chosen for superior medical and surgical knowledge. Sometimes two physicians have to report as to the cause of death, to depose before the procureur on oath, and give their opinion on the case. In the event of a crime the procureur calls upon the inquisitorial magistrate to order an inquiry, and if he considers the evidence sufficient, an indictment is prepared for the Cour d'Appel, and the trial takes place at the Assize Court before a jury. The chief difference between the French and Scotch systems is, that French judges have power to and frequently make brutal attempts to extort criminatory admissions from accused persons, which would not be tolerated in this country.

In Russia the investigation of violent deaths is made by a Judge of Instruction, appointed for the district by the Central Governor or Council of the Province or State. He takes charge of the corpse, can seize all papers and correspondence, put seals on private papers and boxes, can summon, examine, and commit to writing the evidence of witnesses, can call in experts, and can arrest and place in close confinement a suspected person. He is, however, supposed to act as an impartial judge, a physician or surgeon, who is a salaried sworn officer of the Crown, takes charge of the medical aspect of the case; he must make a necropsy if any suspicion or doubts exist as to the commission of a crime. He gives to the court, and to a central Medical Board, a written account of the necropsy, and his conclusions as to the cause of death. Recently each Russian village has certain citizens designated by its mayor, whose duty it is to search for and give evidence as to known facts, but they have no voice in the decision like our juries.

In Germany an inquest is conducted by a judicial officer, having the powers of an attorney, a committing magistrate and a police justice, and having the police completely under his control in the investigation of crime. Judicial district medical officers, regularly appointed on account of special fitness for forensic duty, exist, but they act as mere servants of the police; the corpse has to be examined according to a prescribed form. If after the inquest, and report of the necropsy, the district attorney suspects a crime, he moves before the proper court; and if after hearing the evidence, that court thinks the evidence sufficient, it orders a preliminary investigation, which is conducted before a justice, with the assistance of the district attorney.

In most of the states of the American Union, a close approximation to coroner's inquests in England, still prevails; but in 1877 Massachusetts adopted a new system, which works so admirably that it is likely to be adopted by the other states of the union. By it, the office of

coroner is abolished, and no juries are called on the preliminary inquiry. Instead of the usual procedure, medical examiners, appointed by the Governor and Council of the State for each district, take charge of the medical part of the investigation, and if they find the case a proper one for legal inquiry, they arrange for proper officials to take charge of the legal or statutory aspects of the inquiry. If he finds a necropsy necessary, it has to be done in the presence of at least two discreet persons, and the facts and circumstances have to be committed to writing on the spot. If, after the necropsy, he thinks the death due to violence, he notifies that to a judicial authority, and files his signed report and certificate in court. The judicial authority then takes up the case, and conducts the legal inquiry.

The medical examiner can call a skilled chemist to analyse the viscera and any articles that may throw light on the case, and adequate payment is provided for the analysis, and if the district attorney or the State attorney-general differs from the opinion of the medical examiner, and thinks that in a certain case death was not due to violence, either of them, according to the Act, may direct an inquest to be held.

It has been found that one-third of the cost under the old system of holding coroner's inquests has been saved by the adoption of the Massachusetts system, and it has other important advantages. No expenses are incurred except in cases that absolutely required investigation; all trivial, formal, or unnecessary inquiries are avoided, and the frequently painful publicity to those last seen with deceased, does not occur except in serious cases. In *British Medical Journal*, vol. 2, 1882, p. 370, Dr. Amory states that during 1880, of 935 bodies viewed, in 229 necropsies were performed. This system secures a carefully written record of the case for the district attorney and the grand jury—better and more frequent opportunities for the study of pathological science, and a more definite knowledge of the cause of death, and altogether it seems to be a system something like what ought to be adopted, when the Coroner's Court in England becomes reformed by Act of Parliament.

During the past eighteen or twenty years, numerous suggestions for the improvement of the Coroner's Court have been published, and several attempts have been fruitlessly made to pass coroner's bills for England and Ireland (*British Medical Journal*, June 10th, 1882, p. 884.) In 1869, a bill for regulating the election and duties of county coroners was introduced into Parliament. Its main provisions were to vest the appointment of coroners in the hands of the Lord Chancellor, or the Home Secretary. The Parliamentary Bills Committee of the Brit. Med. Association at that time preferred that the election of coroners should be vested either in the registered freeholders, or in the justices of the peace for the county, and the first of these proposals was adopted by the Committee of the House of Commons, the electorate being at the same time enlarged, but that bill was withdrawn (*British Medical Journal*, vol. ii., 1874, p. 651). In November, 1874, the election of a successor to the late Dr. Lankester, as coroner for the central district of Middlesex, afforded an apt illustration of the defects of the present system of election of coroners. Sometimes a polling takes place like that for a M.P. Committees with a long array of names are appointed, votes are earnestly solicited, and the excitement and expense are often great. The late Dr. A. S. Taylor considered the present mode of election as objectionable,

vicious, and costly to absurdity, he having known cases in which from £7,000 to £10,000 had been spent on an election, and thought that a nomination by the Lord Chancellor, by whom our county court judges are nominated, would secure better men for the office of coroner. The advantage of such a mode of election of coroners will be obvious if we conjecture for a moment. What sort of judges we would have if the Justices of the Queen's Bench or the Common Pleas were elected by the freeholders of the county, whose independent vote and interest they would have to solicit individually. The opinion of the profession on this point is indicated by the resolutions of British Medical Association Parliamentary Bills Committee, while the Coroner's Bill of 1879, which had been introduced into the House of Commons, was under a Select Committee to whom it had been referred. The gist of these resolutions was—

That the duties of a coroner should be, to determine the cause of death; that he should not have power to issue warrants for the committal of those charged with manslaughter or murder, but that his report and the dispositions should be placed before a justice of the peace for further proceedings.

The coroners should either have served as officers of health, or have passed an examination in state medicine.

That the election of "franchise coroners" by universities, boroughs, corporations, or deans and chapters, or by the Lord Steward of the Queen's Household should be suppressed, and that the appointment should be made by—1, The Lord Chancellor; 2, The Lord Chancellor associated with the President of the Medical Council, or of the Royal College of Physicians, or of Surgeons; 3, The Home Secretary in conjunction with the President of either College; or 4, by a county board of management, or the magistrates.

Copies of these resolutions were sent to the Select Committee, with a request that Dr. A. S. Taylor might be allowed to give verbal evidence regarding them, but they did not hear Dr. Taylor.

In 1871, the Parliamentary Bills Committee of the British Medical Association had opposed the Coroner's Bill, then before Parliament, which would have deprived poor-law medical officers of their fees for necropsies performed for inquests, and, in 1877, a Sub-Committee, in conference with several teachers of medical jurisprudence and medical coroners, had drawn up a report containing a large amount of information regarding the appointment of coroners, and the conduct of the courts, which was forwarded to the Home Secretary.

It was on November 14th, 1877, that this meeting of the Parliamentary Bills Committee of the British Medical Association was held for the purpose of conferring with some professors of medical jurisprudence and Metropolitan coroners on the subject of the law relating to coroners inquests, Mr. Ernest Hart in the chair, of which the following is a concise summary:—

A memorandum from the late Dr. A. S. Taylor suggested that special pathologists and special analysts ought to be appointed by magistrates in Quarter Sessions, or with their consent, by the Home Secretary, for each county or borough, to undertake inquests, instead of local medical practitioners or local chemists.

Dr. Hardwicke, coroner for Central Middlesex, suggested that the coroner should be either a legal or medical practitioner of a certain standing, as at present is frequently the case, and that he should be vested with the powers of a magistrate. Viewing the body to be dispensed with, provided identification of the body be sworn to by friends or relatives before the coroner. Public mortuaries to be provided in suitable places for every district, the police station being used in country villages. Coroner to have power to employ special patho-

gists or experts, and the public analyst. A schedule of cases proper for inquests to be drawn up, including inquiries as to (1) suicide, homicide, infanticide; (2) deaths from accidents and other violent causes; (3) sudden deaths, when no medical certificate is given; (4) all persons found dead; (5) persons found in a dying state; (6) in deaths from natural causes in public institutions, when the circumstances are at all mysterious. And he thought that if the profession would submit to the employment of experts in such cases, that the only change in the law required would be a clause in some future bill to amend the Medical Witnesses Act.

Dr. Ferrier, F.R.S., suggested also the employment of experts in such investigations, who were to be debarred from general practice.

Mr. Holder, Hull, thought the coroner should always be assisted by a medical assessor to decide whether it was desirable to hold an inquest or not, and he held that young men entering the profession were quite competent to perform a *post-mortem* examination, but he held that chemical experts were necessary, because medical men were not prepared to make an analysis of subtle poisons.

Dr. J. C. Bucknill, F.R.S., thought that the sanitary medical officer was the one who ought to be employed in such cases, if he could perform an analysis, as well as make a proper *post-mortem* examination—a proposition which had been made by the late Dr. Rumsey—and he thought that a State prosecutor, if appointed, would greatly assist the coroner, or that a State medical officer, analogous to the Kreis physicians of Germany, should be appointed.

Dr. Southey thought that the coroner should be a barrister, with a seat on the county bench of magistrates, and a salary equal to that of a County Court Judge, with a medical coadjutor, who had passed a special examination in hygiene and medical police, or was health officer of the district, at a salary of not less than £500, with a Court of Appeal, consisting of three professors of medical jurisprudence, one surgeon, and two analytical chemists, constituted in London to decide in cases of extreme doubt or difficulty.

Mr. C. J. Carter, coroner for West Kent, who had been forty-six years a coroner, stated that the law on the duty of a coroner was clearly laid down in a book, which was out of print—viz., Humphrey on coroners, and gave instances of very exceptional experience, in his duty as a coroner, which convinced him that the law of the Coroner's Court required very little change, as he believed that a coroner had unlimited power to do what he considered best, that he had power to order three or four persons to make a *post-mortem* examination, and to pay them. He had paid 12, 35, and up to 50 guineas for analyses; the Penge case having cost £35. He held, however, that it would never do to place the appointment of coroners in the hands of the magistrates of the county, and he held that the discussion about *post-mortem* examination seemed a slur on the profession.

Subsequently communications on the subject of the reform of the Coroner's Court were laid before this committee from Sir Robert Christison, Dr. Diplock, the coroner for West Middlesex, and were recorded in the *British Medical Journal*, vol. 2, 1877, from several provincial surgeons and coroners—which need not be recapitulated here.

In the *British Medical Journal* for January 19th, 1878, a most important memorandum was furnished by Dr. Alfred Swayne Taylor, F.R.S., for the use of the Parliamentary Bills Committee to which I beg to refer you, as it forms one of the ablest and most exhaustive papers which have been written on the subject.

When Dr. Taylor was not heard by the Select Committee in 1879, the British Medical Association Parliamentary Bills Committee appointed Dr. A. S. Taylor, Mr. Sibley, and Dr. Joseph Rogers, to examine the Coroner's Bill; and on February 19th, 1880, these gentlemen, along with Mr. Ernest Hart, waited, as a deputation, on Mr. Cross, the Home Secretary, and the chief points insisted on, in objection to the proposals of the Select Committee were: (1) That medical men should not be excluded from holding the office of coroner for which their professional knowledge especially fitted them; (2) that when infirmity or hospital surgeons give evidence at coroner's inquests, the customary fees should be paid to them.

In consequence of the change of government the Bill was abandoned, and no measure of the kind has since been brought before Parliament until last year, when the Coroner's Act, 1887, was passed. There can be no doubt, however, that the time is not far distant when other proposals will be made, and another attempt to reform the Coroner's Court will receive the attention of Parliament.

(To be continued.)

THE NECESSITY FOR REGULATING THE AMOUNT OF FLUID INGESTED IN CASES OF CARDIAC FAILURE.

By JAMES BARR, M.D.,

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It too frequently occurs that when a medical man has written a prescription for his patient, and given some general instructions as to diet and hygiene, he considers his duties discharged. If the patient be at all seriously ill, he is put on a liquid diet, irrespective of the nature of the ailment, or the state of the emunctories, or the hydration of the tissues. If any diuretic effect is required, an increase in the amount of urine voided is considered sufficient indication that the desired effect is being attained without any calculation as to the amount of fluid that has been imbibed. In calculating the diuretic effect of any medicinal agent, you must take into account the amount of water in which it has been exhibited. Water itself, especially when holding a saline in solution, is an excellent diuretic, provided the central pump be in good working order. About two-thirds of the weight of the whole body is composed of water, and in the soft tissues of course the percentage is much higher. In youth, the pliability of the skin and rounded outline of the features are due to hydration, while at all ages the range of variation in the amount of fluid in the tissues of different healthy individuals is considerable, and in cases of dropsy the tissues are bathed in fluid, which is so excessive as to hinder rather than favour metabolic changes. A constant interchange of fluids is so essential for cellular activity, and the due performance of the vital functions of all the tissues, that a healthy human being can only live for about three days without fluid; but in cases of dropsy, where the patient has a large reservoir in his tissues, the supply can be cut off for a much longer period. The range of hydration of the soft tissues consistent with health has never been determined, but there can be no doubt that though this range is considerable, there is a limit which cannot be overstepped in either direction without seriously interfering with vital function. The dehydration of the tissues resulting from the watery evacuations in cholera, and the excessive hydration in cases of dropsy, may be cited as good examples where the limit has been transgressed in these respective directions. All growing and functionally active tissues contain a large percentage of water, but in maturity it is not your watery individuals who always live the longest. Much valuable information might be obtained by taking the specific gravity of a large number of individuals were it not that the scientific value of such observations would be vitiated by the impossibility of determining the disturbing agency of the varying amount of fat in different persons. We must therefore be content with less rigid observations, and draw our deductions from our impressions as to the general condition of the tissues.

Pure distilled water would be inimical to the life of the tissues, if directly applied to them, on account of its power of abstracting the salts and soluble substances essential to their vitality, and passing into the cells by the process of endosmosis, thus causing them to swell. With the exception of its local action on the skin and mucous membrane, water never comes into contact with the tissues in its pure form, as it gets first mixed with the contents of the stomach and the blood. Large quantities of water, especially the saline mineral waters, do cause swelling of the superficial layers of the epithelium of the intestinal tract, and thus lead to unusual shedding and consequent renewal of the

epithelium. In the case of the internal organs this action is considerably modified as the water is presented in the form of a saline solution in the blood, which in health preserves a fair state of uniformity—any excessive supply of fluid being excreted almost as quickly as it is absorbed, so that there is no marked dilution of the blood. No doubt, the more rapid the interchange of fluids between the blood and tissues, the greater the metabolism, and a large supply of fluids and saline solutions do, within certain limits, increase the excretion of nitrogenous waste products. In many morbid conditions a free supply of mineral waters has a highly beneficial effect, but in order that the excess of fluid may be quickly disposed of, the heart's action must be fairly vigorous, and the emunctories in good working order. When these physical conditions are present, the enormous amount of fluid which can sometimes be consumed without apparent injury is rather astonishing, and it is very fortunate for the crude empiricism and blind faith of hydropathists, and of many physicians, at mineral water resorts that such is the case. The wonderful provision in nature whereby the density of the blood is pretty uniformly maintained, notwithstanding the dilution to which it is submitted, allows empirics to prescribe with a free hand and bold faith the mineral water, from the vaunted efficacy of which they largely draw their means of subsistence. But when any patient with a feeble circulation is submitted to this routine treatment, the result is not encouraging. When the propulsive power of the heart is feeble, or there is any mechanical obstruction to the onward course of the blood, the fluid is not got rid of as quickly as it is absorbed; it accumulates in the blood-vessels, dilutes the blood, increases the hydration of the tissues, lessens the interchange of fluids to and from the vessels, and by increasing the mass of fluid in circulation greatly augments the work of the heart.

In my papers on the "Pathology and Treatment of Dropsy,"¹ and on the "Treatment of Heart Disease,"² I have strongly insisted on the necessity of regulating the amount of fluid imbibed; but doctors and patients have been so long in the habit of drinking *ad libitum*, that too frequently no restraint is put on this practice.

It is not uncommon to see the medical attendant in a case of dropsy determining that the patient is to be sweated, purged, or plied with diuretics, and carrying out his intention with a very vigorous hand, but not paying the slightest attention to the amount of fluid taken in. If you want to empty a reservoir quickly, your attention should not merely be taken up with increasing the outflow, but also by cutting off the rivulet which keeps it full. If the outlet cannot be made greater than the inlet, then your efforts will be futile until you direct your attention to the latter. When the excretory organs are acting well, and the heart's action is vigorous, then you need pay little heed to the fluid taken in; but when the emunctories act badly, and especially when there is structural disease of the myocardium, then all heroic treatment should be avoided, and the amount of fluid taken into the body should be carefully regulated. Some sanguinary physicians have even been known to take half a pint of blood from the arm, and immediately afterwards replace it with a pint of warm milk in the stomach.

Some time ago I had a patient who suffered occasionally from irritation of the urinary passages, with excessive excretions at times of uric acid, and at others of earthy phosphates. It was a case where the use of mineral waters

¹ *Liverpool Medico-Chirurgical Journal*, July, 1886.

² *Ibid.*, July, 1887, and July, 1888.

might seem to have been indicated, but, as he had a feeble circulation, I cautioned him, before his visits in two successive years to two celebrated mineral water resorts, to be satisfied with the pure air and healthful exercise to be obtained in those elevated regions, without trying their supposed marvellous springs. On both occasions he was induced to consult a leading physician in each place, who understood all about the wonderful virtues of the waters, with the inevitable result that the waters were freely prescribed. On each occasion the patient returned much worse than when he left, and was afterwards quickly cured by a quinine tonic, and increased oxidation by healthful exercise in a place where there was no mineral spring.

I have, at present, under my care in the Northern Hospital, a patient who was admitted some weeks ago suffering from great mitral constriction, free tricuspid, regurgitation with evidence of commencing stenosis, great enlargement and hardness of the liver from chronic congestion, large ascitic effusion, general venous turgescence, and urgent dyspnoea. On a dry diet the patient has markedly improved; there is no dyspnoea, the venous turgescence has disappeared, the ascites has lessened, and she is now able to move about the ward, and has the prospect of returning home fit for light household duties. This woman had been several times in another institution, where she was kept on a liquid diet, and as she thought that an excessively morbid interest was taken in her case, on each occasion when she considered that she was near her latter end, she fled home to save a *post-mortem* examination.

Every drop of liquid which is placed in the stomach, with the exception of part of that which passes away in the fæces, must pass through the right side of the heart, and all of this, except that which is exhaled by the lungs, must pass through the left side before it can be excreted. When therefore there is any mechanical obstruction to the passage of the blood through the heart, or when the effective force of the heart is diminished, any increase in the amount of fluid in circulation must severely handicap the central pump. The velocity of the blood depends on the effective force of the cardiac contractions, and on the mass to be moved, and is inversely as the sectional areas. It therefore follows that when you have got a weak heart and a great amount of blood in the vessels, the circulation becomes very languid, and in a given time comparatively little is presented to the excretory organs. By the use of cardiac tonics to improve the force of the heart's beat, and by reducing the supply of fluid, thus lessening the bulk of blood, we lessen the static condition, and increase the velocity of the circulation. The potential is converted into kinetic energy, there is a more rapid interchange of fluids between the blood and tissues, the hydration of the tissues is lessened, while the oxygen carrying power of the blood and the oxidation of effete products are augmented, the congestion of all the internal organs is diminished, and their functional activity heightened.

The amount of fluid which different individuals in health consume varies very much, but the majority of persons are apt to drink more than is absolutely necessary for metabolism, as may be easily adduced from the healthy lives which some individuals lead with a very limited supply of liquids. When there is any marked cardiac failure, the quantity should be restricted to the smallest possible amount, and in a large number of cases one pint of liquid, including the fluid portion of the food, will be found sufficient, while if there be any dropsy, the quantity may in many cases be reduced still further.

GASTRODYNIA: A CLINICAL LECTURE.

By ROBERT SAUNDBY, M.D. EDIN., F.R.C.P. LOND.,

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I DESIRE to draw your attention to the subject of gastrodynia; it is a condition you will commonly meet with in practice, and although want of acquaintance with it may easily lead to serious mistakes, the descriptions it has received from systematic writers and lecturers have been very imperfect.

In speaking of gastrodynia, I refer to a painful affection of the stomach, occurring quite independently of any organic disease, such as catarrh, ulcer, or cancer. This condition is sometimes called gastralgia, but most people employ this latter word to indicate stomach pain occurring under any circumstances, while they say gastrodynia when speaking of pain of purely nervous origin. Gastrodynia divides itself, from a clinical point of view, into two natural sub-divisions or groups, having this marked difference, that in one the pain comes on or is made worse by food, while in the other the pain comes on while fasting, and is relieved by food. You must clearly separate these two groups in your minds, as they require very different treatment, and probably depend upon essentially distinct pathological conditions.

GROUP I. *Pain after Food.*—Of course, you are not to suppose that every case of pain after food is one of gastrodynia. You know very well that pain after food is a common symptom of dyspepsia, as well as of organic disease of the stomach. I have constructed a table of the chief symptoms in this form of gastrodynia and the diseases of the stomach with which it may be confounded, *e.g.*, atonic dyspepsia, catarrh, ulcer, and cancer:—

SYMPTOMS	GASTRODYNIA	ATONIC DYSPEPSIA	GASTRIC CATARRH	ULCER	CANCER
Character of Pain	Dull, heavy	Dull, heavy	Burning soreness	Acute stabbing	Cutting
Locality ...	Epigastrium	Epigastrium	Behind sternum	In one spot	Epigastrium
Incidence ..	Immediately	Aft. 1 or 2 hrs.	After 2 or 3 hours	Immediately	Aft. 1 or 2 hrs.
Tenderness .	Sometimes	None	None	Usually	Usually
Vomiting....	Usually	None	Often some retching	Usually	Usually
Hæmatemesis	None	None	None	Usually	Usually
Tongue	Clean	Clean	Furred	Clean	Variable
Tumour	None	None	None	None	Usually
Age	Usually under 30	Any age	Any age	Usually under 30	Usually over 40
Sex	Usually female	Either	Either	Usually female	Usually male

It is least like cancer of the stomach, which usually occurs in men over forty years of age, and manifests itself by a tumour which can be usually felt in the epigastrium, by vomiting, often by hæmorrhage, and by the rapid wasting and cachexia of the patient. It is most like ulcer, the classical chronic ulcer of the stomach, which in nine cases out of ten occurs in anæmic young women; the pain comes on in both in the same way, directly after food, and is frequently followed by vomiting, which gives relief. There may be cases in which it is permissible to hesitate between these two diagnoses, and there are very probably cases of anæmic gastrodynia in which ulcers afterwards develop. The main distinguishing points are: (1) That the pain of gastric ulcer is more acute; (2) that it is localised to a single spot, the size of a shilling, instead of being a dull heavy pain going through to between the scapulæ behind; (3) that it is nearly always associated

with tenderness, while tenderness in gastrodynia hardly exists, but is sometimes simulated by the hyperæsthesia which may be present; finally, and most conclusively, though by no means a constant symptom, hæmatemesis is absolutely decisive of the presence of ulcer in this alternative. Before we go any further let me read to you a brief account of a fairly typical case:

Case 1.—Louisa Carter, aged fifteen, general servant, was admitted as an in-patient under my care on June 3rd, 1886, complaining of vomiting and pain in the stomach, which came on after food. This illness had existed for three months, her previous health having been good. Shortly before admission she had had two or three fits, in which, however, she did not hurt herself or bite her tongue. She looked anæmic and poorly nourished, and answered questions only in whispers. She said she had lost her voice several times before. Her tongue was clean, bowels confined, physical examination revealed only a hæmic murmur on the base of the heart, while with the laryngoscope the vocal chords were seen to be imperfectly approximated. The pain came on immediately after food; there was some difficulty in swallowing, caused by a sense of pressure behind the upper end of the sternum, and she was said to be vomiting "every thing she took." The vomited matter was free from blood. Menstruation had been absent for three months. She was ordered house diet, *mistura magnesiæ sulphatis c. ferro* 3j. *ter die*, and a cold bath at 60° F. every morning. On this treatment she got on very well, and was ultimately made an out-patient, no recurrence of vomiting taking place in the hospital.

This case illustrates very well the nature of this group. This girl had many well-marked hysterical symptoms, the aphonia, due to partial paralysis of the adductors of the larynx, the epileptiform fits, and the sense of pressure on the œsophagus. The gastrodynia and vomiting are equally to be regarded as nervous phenomena, dependent upon the same hysterical diathesis. These are the patients who try to starve themselves, the so-called cases of hysterical anorexia, or *anorexia nervosa*, as it is now the fashion to term it. They are the victims of a vicious circle in which anæmia causes pain; pain prevents a sufficient food being taken, and this aggravates the existing anæmia and debility, and favours the development of hysteria, in which the previous dread of food becomes a fixed and insane idea. Such patients are capable of starving themselves to death, three fatal cases being within my own knowledge, though only one I am glad to say occurred in my own practice. In that case the patient was a young man, who had been anæmic for several years, and had suffered from repeated retinal hæmorrhages. The gastrodynia had produced anorexia long before he came under my care, and he had been in several massage homes in London, with more or less temporary benefit. He was a mere skeleton when I saw him, but with no evidence of organic disease. A nurse was put to watch him to see that he ate his food, but unfortunately she allowed the patient to deceive her; he gradually got weaker, and died rather suddenly, various receptacles in his bedroom being found full of the food he was supposed to have taken. A *post-mortem* examination, made at the wish of the relatives, to see if there was any cause for the pain of which he had so persistently complained, showed no changes except those attributable to inanition.

The principles of treatment employed in my earlier

cases were (1) to insist upon a sufficient supply of good nutritious food being taken, and if necessary to use the stomach pump; and (2) to give iron in combination with a purgative. But within the last two years I have found cocaine a valuable addition to these means. A small dose before food prevents the pain, and makes it much easier to carry out these principles. I employ the following formulæ:—

R	Cocainæ hydrochlor.	gr. 1½.
	Aque 3i.	
Sig.	To be given every hour before food.	
R	Ferri Sulphatis	gr. ij.
	Acidi sulphuric	℥xv.
	Magn. sulph.	gr. xl.
	Aq. menthæ. pip.	3i.
	℥ ft. ht.	
Sig.	Thrice daily.	

Light, nutritious, but solid food should be given every hour, about ten minutes after the medicine, in quantities not to exceed two ounces. No fluids should be given at the same time, and always in very limited quantities. Thirst must be relieved by ice to suck. The diet should consist of boiled white fish, boiled or stewed chicken, stewed sweet-bread, boiled or poached eggs, raw oysters, boiled calves' feet or head, stewed tripe or cow-heel, jelly, blancmange, baked custard, farinaceous food (made with only a little milk), bread and butter, Devonshire cream, and the like. The essential rules are: 1. Food every hour; 2. quantity not to exceed two ounces; 3. no fluids; 4. no vegetables or fruit. Fresh air and moderate exercise will powerfully aid the cure, when by other means the main symptoms have been controlled, but at first it may be necessary to keep the patient altogether in bed.

GROUP II. Pain relieved by Food.—This is not a condition at all liable to be confounded with gastralgic pain due to disease of the stomach, for the very good reason that in all of them the pain, if present when fasting, is never relieved by taking food. This form of gastrodynia is met with in neurotic, as distinguished from hysterical people. These are persons of nervous temperament, by no means emotional, usually of more than average intelligence and energy, but with spare frames and slender muscles. The pain is brought on by fatigue, fasting too long, anxiety of mind, or worry. Its character is that of a gnawing misery at the pit of the stomach, not associated with any tenderness, but sometimes relieved by pressure, and removable, at least temporarily, by stimulants and food. This was the malady from which Thomas Carlyle suffered, and to which we may attribute much of the mental irritability which clouded his life. I have met with it several times in men who had had to bear heavy responsibilities too early in life, constantly in over-worked clergymen and others.

Case 2.—A manufacturer, aged thirty-one, who lost his father when he was nineteen years of age, and since that time had to carry on the business and maintain his father's family, complained of soreness at the pit of the stomach, and a gnawing sensation, which came on half way between meals, increased towards the next meal time, and was relieved by food. The pain was also at any time brought on by worry or fatigue. He was a spare, tall, hollow-eyed man, with no evidence of organic disease, a clean tongue, regular bowels. He was ordered the treatment shortly to be mentioned, by which he got relief, and has now greatly improved in his general health.

Case 3.—A clergyman, aged thirty-four, at present

engaged in mission work, but who had had very hard parochial duty in Melbourne, Australia, complained of a dull pain in the epigastrium, relieved by food. When in Melbourne he had suffered in the same way. He was a tall, spare, dark man, with a clean tongue, regular bowels, and nothing abnormal to be detected about either physical signs or urine. He was treated on the same place with equal success.

This plan of treatment is in the first place to give small doses of morphia to relieve the pain.

R Liq. Morphinæ hydrochlor. ʒ iij.

Aquam ad..... ʒ ij.

Sig. A tablespoonful when the pain comes on.

I recommend them to keep a dose always in their pockets. Next to give a tonic, perhaps Easton's syrup of the phosphates is as good as any, but it must contain strychnia. Give a drachm of the syrup three times a day. Finally, these patients must be made to *rest*, to stay a longer number of hours in bed. Send them to bed earlier and make them get up later; make them ride instead of walk; insist upon three good meals a day, at regular intervals and regular times, with a couple of glasses of sherry or claret at luncheon and dinner. If they are over-worked, seek to diminish it by cutting off all unnecessary or honorary work, such as so many men do in connection with various institutions and organisations.

The use of morphia is of the most signal advantage; you will find that it not only relieves the pain in the stomach, but the mental irritability by which it is accompanied, and renders the patient to some extent proof against a fresh attack while its influence lasts. It is by no means necessary to take very much morphia, probably one dose daily, and after the first, if the whole of these recommendations are carried out, its use becomes only occasional.

Avoidance of fatigue and of unnecessary walking is of great importance. These patients are too thin; they gain weight and lose their pain when they go for a holiday, but at their work they lose flesh, not much it is true, but still they keep about as thin as they can well be. If you can fatten them you will cure them; and you will do this if you will carry out these principles.

A SKETCH OF AN HYPOTHESIS "TOWARDS VITO-CHEMICAL METHODS IN PATHOLOGY AND THERAPEUTICS.

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(Continued from page 306.)

We shall see at once that diabetes is deeper down in the disturbances of organic evolution, than that it belongs to the floor of the fourth ventricle, or to the liver; but rather, that diabetes is a phenomenon of vito-chemical reversion, whose conditions—so-called "causes"—are in molecular disturbances. I should assume also that amyloid degeneration is a reversion, from deficient molecular energy; and so again, is not tubercle, and phthisis in general, a degeneration from higher vital forms of cell growth, a result of deficient energy? I could hardly avoid citing these instances of seeming results of deficient molecular energy, to illustrate the great place which the higher-vito-chemistry has in relation to disease, and as bearing on the future classification of disease and on therapeutics; but my immediate view was to make a provisional base in the carbo-hydrates, to show the vast continuity of the alcohol series, and to point to the relation

of these vito-chemical facts to some very important diseases. We do not suppose that any process absolutely identical to that of alcoholic fermentation can be traced in the living body. The physiological significance of the alcoholic fermentation is that it shows us the broad Method of vito-chemical changes; it shows that the most prevailing cell-forms, *e.g.*, sugar, are but in most unstable equilibrium if brought in contact with certain other molecular motions of cells; and it shows further how wide may be the new molecular changes which are set agoing by the contact of the smallest amount of the newly-applied agent. The potentialities of yeast cells seem to be but one instance of a great Form of molecular energy belonging to all cells. Sight can reveal no essential differences between the cobra salivary secretions and that of vaccine lymph, or between the cell structure of different genera of animals; but we know the vast differences of their potentialities by their results. Such differences in results reveal the vast range and difference of rate of the ultimate molecular motions, and this applies to the whole cell-world. There is revealed to us an universal Form of molecular energy and motion becoming cell-life, and cell-life also in its higher evolutions, in the vegetable and animal worlds. It is to ignore all philosophical method, if we do not view the whole range of spermatozoon, ovum, and their pan-cellular correlations within the body, and also their subsequent extreme differentiations, as parts of one great Form of energy becoming life. If we shrink from this generalisation, our only refuge is in the method of an infinite series of catastrophetic phenomena. It is no less true that our cell differentiations, in their most permanent forms, are but transitional types, determined in part by environment. The foundations of pathology must have as commensurately wide a basis as have the Forms of cell evolution.

We know that the glucose carbo-hydrates exist in the normal states of the body. In diabetes the breaking up of normal hydro-carbons, etc., must be happening, as is manifested by the great wasting of the body in this disease. We are thus led to view diabetes as a natural vito-chemical reversion. But a wider study of molecular law is seen in the sugar series: the first and immediate product of the splitting up of the molecular states of sugar is the evolution (in Continuity) of alcohol. In other words, alcohol is the *nearest* mode of organic matter to sugar, and therefore, to a vast amount of organic being. Theoretically, therefore, alcohol has one of the nearest modes of motion (shall we say assimilability?) to protoplasm. I am obliged to hold that often in the prestige of various diseases—such as fevers, dysentery, cholera, inflammations, etc.—that alcohol has warded off the full devolution of protoplasm into the special "poisons" which precipitate those diseases. I hold that alcohol has, in cases, arrested the full evolution of "blood-poisoning" after parturition, has re-lit "energy" after fatigue, and warded off the devolution of protoplasm, which else had passed on to tropical fevers, cholera, etc.

Whether these opinions be solid inferences from facts or not, we all know that alcohol has a great and rapid power of producing heightened joyous function of life. This great power must have vito-chemical correlations in Continuity with those molecular changes which are so near and so allied to those of the carbo-hydrate group. Alcohol becomes to our minds a kind of revealer, a "migratory instance" of the molecular Form of life. That alcohol is the nearest and *first* change from carbo-hydrates, under organic molecular motion, and that it is so rapidly again

assimilated, reduced back to somewhat allied or parent organism, reveal to us a glimpse of the possible method of the evolution of disease, and also the method of our therapeutics. I have glanced at the place of alcohol vito-chemically, molecularly, and therapeutically; whilst, above all, its "induced" evolution from carbo-hydrates, by contact with a somewhat different polarity of cell molecular energy, suggests by analogy the method and possibility of the evolution from protoplasm of many new bodies within the system, by the action of the very varied so-called ferments, *i.e.*, by cells and fluids under different molecular conditions.

I have provisionally started our view of molecular energy in organic evolutions and changes from the stage of carbo-hydrates, sugar, etc., as acted on by yeast; but from this point we can study backward the conditions which, in true Continuity, have led up to the existence of the sugars, and to the existence of yeast. And we can also pursue onward the further derivatives or conditions of the alcohol series. And this series vastly pervades organic life, both vegetable and animal, and embraces a vast range of bodies, which are most powerful therapeutically. There appears to be a strong analogy between the therapeutic effects of many bodies of the alcoholic series and the symptoms of many of the greater groups of disease.

When a classification of disease shall arise, based mainly on vito-chemistry, the method and laws of the derivatives of the alcohol radicals must very much enter into the basis of such a classification. We see that the earlier series of the alcohols—including the alcohols, ethers, chloroforms, etc.—have an allied influence on the protoplasm and animal functions—the primary excitement, the heightened energy and function, the after-stupor, etc.; and we are sure that a great common Form or law of molecular action must pervade their action. Nothing within the range of human knowledge is more wondrous than the variety and powers and properties which have been revealed out of the coal-tar series, which is but the stored molecular energy of organisms and cell-life. The changes of molecular motion, when sugar evolves or passes into alcohol, etc., is but one instance of these living and ever-acting Forms and powers. We cannot rest until we know *how* alcohol, etc., act on the system, and on its protoplasm. The existence of a mighty pervading Form of molecular energy, becoming life, is everywhere revealed. Its order and laws *must* be cognisable to right Method of mind. The physician craves to know *how* alcohol, etc., act, that he may have a surer light on their use in practice. Will, *e.g.*, alcohol in many cases of changes evolving or developing toward disease really arrest the metabolism of protoplasm? *i.e.*, will it prevent the autogeny of *pre-mortem* poisons? In the cosmic evolution, what processes common to both have led to a somewhat allied molecular power in the secretion of the poppy, and in the first product of the splitting up of sugar by yeast? And further, must there not be an absolute nearness in the order of these creative energies to that which has developed the aptitude of the molecular motion of animal protoplasm and cell-contents, to receive so rapidly their influence or motion? We acknowledge the Continuity of the processes in inorganic chemical actions, and in the correlations of the physical energies, and *à priori* we must submit to acknowledge Continuity in the organic. Here also opens a hope for a future light of Method in our therapeutics.

We are perplexed and agonised by the mass of immethodical facts in our therapeutics. Are we not justified in

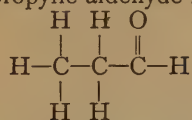
seeking some approximative general laws, based on the hypothesis of cosmic evolution and Continuity, and upon an universal Form of molecular energy, acting by fixed laws, which has become in all the past, and is now, of the same rate and order, becoming life, which shall lead us to light in our therapeutics? Are we not justified in the use of Deductive Ideas and Method as hypotheses.

It does appear to me that a path toward a generalisation in molecular therapeutics is opened by the alcohol series. Viewed chemically, there is an allied series of unstable bodies, derived from the splitting up of more elementary and stable organic structures, under the molecular influences of actively living and germinating cells. Viewed therapeutically, a great proportion of these alcohol derivatives have an allied action on the cell protoplasm of the body, *e.g.*, as seen in disturbed function. Ethyl-alcohol and its earlier derivatives, such as ethyl-ethers; methyl-alcohol and its ethers, such as chloroform, etc.—all have an allied influence on the body. They all heighten—and if applied in larger amounts, deaden and destroy—the highest results of cell activity—feeling, mind, senses, powers, and life. These great therapeutic results may have a very gradual development, according as we may apply more or less of the alcoholic agents, or different members (*i.e.*, different states of the motion or energy) of the series. This fitness, this easy adaptability of the alcoholic series to the varied functions, and organs, and processes of life, must indicate, must demonstrate, a grand law or Form of molecular activity, common to the whole phenomena.

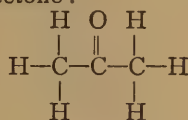
I think, then, that a view of the therapeutic actions of the alcohol series, combined with a view of the field of functions influenced by the alcohol series, opens to us a path of promise by which we may compass some true knowledge of the actual molecular laws of life, from the first splitting up of the sugar, to the full influence of some members of the series on those cells which determine the senses, mind, and feelings; and to those yet wider actions where alcohol modifies the modes of the ultimate "gem-mules" of the processes of life. We seek the laws or Forms of molecular energy, that we may apply them to our philosophy and therapeutics by a right Method; but so infinite is the field, and so complex are the higher processes, that our hope of success must rest in our following the streams in the earlier and less involved courses; and some of these relatively simpler streams are in the earlier forms and bodies of the alcohol series. But if we find a marked parallelism between a very great variety and field of symptoms and the effects of the earlier bodies of the alcoholic series, it is no less true that in the further or later derivatives of the alcohols we find bodies whose effect on the system is strikingly like to the types of some of our most marked "diseases." But before seeking, however approximatively, to indicate such a parallelism, it is important to remember that in disease, as in the forms of species, etc., there can be nothing absolutely fixed; but that types of disease merge, and that a Continuity exists between the normal and the diseased rates. Nor can I conceive that what we call purely chemical bodies can be absolutely demarked: a continuity in the molecular processes must pervade all the bodies, of any series; and what we already know of the differences of power of different molecular structure of isomeric bodies compels us to hold that organic chemical bodies, of like composition, may and do possess very different and graduated powers. The *absolute* "specific" does not then belong to well-defined

chemical bodies any more than it belongs to species of animals, or to cells, etc.

In continuity with the evolution of the alcohols appear the aldehydes. "Aldehydes corresponding to eleven of the primary alcohols . . . are known." "Aldehydes are characterized by their extreme readiness to undergo polymeric modification" (Enc. Brit., 9th ed., p. 567). Keeping in view that the molecular energies and motions of cell-life existed in the primary sugar and yeast, that such energies, though modified, must exist in their first and nearest derivative alcohol, we are compelled to hold that they must also exist in the Aldehydes. One of the modifications of Aldehyde, where Cl takes the place of H, is Chloral; this substance, like the alcohols, ethers, etc., shows special power over, or facile correlations with, the molecular modes or motions of nerve-cells; and such function or property compels us to recognise the as-yet unread Form or law of molecular energy as expressed by its therapeutic action. In viewing the Aldehydes we are overwhelmed with the range of their "polymeric modifications." "The Aldehydes . . . have very striking and characteristic qualities; and these qualities may be, to a great extent, traced to their peculiar molecular structure. If we only make so small a change as to transfer the oxygen-atom from the terminal to one of the central atoms of the carbon-nucleus, we obtain a class of compounds which, though isomeric with the Aldehydes, have wholly different qualities, and are called Ketones. The Ketone isomeric with propylic aldehyde is called acetone:



Propylic Aldehyde.

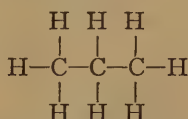


Acetone.

(Cooke's "New Chemistry," 8th ed., p. 339).

In the Aldehydes, and in their vast series, as in other organic bodies, we are overwhelmed by the present complexity of detail and by the great results toward widely different properties of what seem the smallest of molecular changes. Take an example of the fundamental fixity, and all pervading and long enduring power of molecular energy.

"Propyl Hydrate



is the third of a series of homologous compounds, of which no less than nine have been identified in our Pennsylvania petroleum" (Cooke, op. cit., p. 338). In such examples the sun energy, in its full correlations, with and of matter, etc., which had become Life in the vegetation of past geological cycles, has still persisted, so much so that a vast variety of organic products are readily obtained from such petroleum. By analogy we may justly infer that the molecular motion of the cells of sugar and yeast are existent in the Aldehydes and in their furthest derivatives. Thus, the paramount thought when we are in presence of any disease—say diabetes—and of therapeutic actions—say of chloral—is that of the great dominant Form of molecular energy and motion.

Ketones.—In the present stage of our knowledge the chemist is necessarily chiefly engaged in the analysis of organic bodies, in the unfolding of the wondrous and orderly involvements of their composition; and thus follow-

ing this method, out of the alcohol motions, evolution, or progression, appear the Ketones. The Ketones "are derived from secondary alcohols, in the same manner that Aldehydes are derived from primary alcohols" ("Enc. Brit.," 9th edit., vol. v., p. 568). "The Ketones are liable to isomeric modification. . . . Every Ketone is metameric with an Aldehyde of the same series. . . . The Ketone 'Acetone' can be obtained by the destructive distillation of citric acid" (op. cit., p. 568). It is in vain, in the present stage of chemistry, and in our state of ignorance of the great Deductive Forms of organic evolution, to attempt to trace the changes, and to express in chemical equations the vast series of actions of the secondary Alcohols and their derivatives. We can hardly do more than to keep steadily in view the Form of Continuity between the primary starting, from sugar and yeast, and all the great series of after-products both of the Aldehyde and Ketone series.

We see in the correlations of the primary and secondary Alcohols, with the great array of their oxidized acids, a great path of vital evolution. These acids form essential parts of the life of many plants and animals—e.g., Formic, Acetic, Mellisic, Lauric, etc., Acids. We must conclude that the molecular modes and motions of the Alcohols are nearly coördinate with, if not absolutely essential to, vegetable and animal cell-life and function.

"The Organic Acids may likewise be regarded as derived from Alcohols by the replacement of H_2 by O :—

Ethyl Alcohol.	Acetic Acid.
$\text{CH}_3. \text{CH}_2. \text{OH}$	$\text{CH}_3. \text{CO. OH}$;
Ethene Alcohol.	Glycollic Acid.
$\text{C}_2 \text{H}_4'' (\text{OH})_2$	$\text{C}_2 \text{H}_2 \text{O}'' (\text{OH})_2$
	Oxalic Acid.
	$\text{C}_2 \text{O}_2'' (\text{OH})_2$ "

("Enc. Brit.," vol. v., p. 553).

Or again, "Organic Acids may be regarded as Hydrocarbons in which H is replaced by Carboxyl :—

Methane,	Acetic Acid.
CH_4	$\text{CH}_3. \text{COOH}$
Ethane,	Succinic Acid.
$\text{C}_2 \text{H}_6$	$\text{C}_2 \text{H}_4'' (\text{COOH})_2$ "

(Op. cit., p. 553).

Cyanides of Hydro-carbon Radicals.—"These compounds, formed by the union of cyanogen with hydro-carbon radicals, are of the utmost interest and importance on account of their metameric modifications: thus we have

$\text{C}_2 \text{H}_6$	$\text{C}_2 \text{H}_5. \text{CN}$	$\text{C}_2 \text{H}_4'' (\text{CN})_2$
Ethane.	Cyanethane	Ethene Cyanide.
	=	
	Ethyl Cyanide.	

("Enc. Brit.," p. 555).

"Starting, then, with the cyanide of a hydro-carbon radical, we get by the action of water an acid containing one atom of carbon more than the hydro-carbon from which the acid is derived, and in this manner acids can be built up from their parent hydro-carbons, and the number of their contained semi-molecules of carboxyl increased; thus:

H. CN	} is converted by the {	H. COOH
Hydrogen Cyanide		Formic Acid.
$\text{CH}_3. \text{CN}$	} " " {	$\text{CH}_3. \text{COOH}$
Methyl Cyanide		Acetic Acid.
$\text{C}_2 \text{H}_4'' (\text{CN})_2$	} " " {	$\text{C}_2 \text{H}_4'' (\text{COOH})_2$
Ethene Cyanide		Succinic Acid."

("Enc. Brit.," p. 555.)

NOTES ON SIX CASES OF INTRA-CRANIAL TUMOUR.

By C. J. BOND, F.R.C.S.,

SURGEON TO THE LEICESTER INFIRMARY.

CASE 1.—*Sarcoma (Round-celled) of Left Hemisphere.*—J. H—, æt, fifty-one; no history of alcohol or syphilis. Present illness came on about fourteen days ago, with "uneasy" sensation in right arm; this developed into loss of power in the upper limb, and the speech has been thick for the last fortnight. Patient has a heavy dull look; speaks thickly, at times incoherently, and complains of pain in the left side of his head. There is loss of power in the right arm, with slight diminution of power in right leg. Anæsthesia of both arm and leg. No facial paralysis, but the left side of the face twitches occasionally. Patella reflexes brisk; no ankle clonus; optic neuritis in both discs. Soon after admission the patient became more drowsy, and eventually comatose, and died in that state three weeks later.



CASE 1.—*Sarcoma of Left Hemisphere.* Vert. Sect. just through Anterior Border of Pons and Crus Cerebri.

Post-Mortem.—An infiltrating soft reddish mass, which, on microscopical examination, proved to be a large round-celled sarcoma, occupying the greater part of the middle

portion of the left hemisphere (see photograph). It had apparently originated in the white matter of the motor area, and spread from that point.

CASE 2.—*Sarcoma (Multiple) of Left Hemisphere (Motor area), and Right Hemisphere (Occipital Lobe).*—J. R—, æt. fifty, a healthy man, was admitted with aphasia, without amnesia, and slight diminution of power in the right upper limb, both of gradual onset, and of about a week's duration. This continued for three weeks, when after a sudden attack of unconsciousness, which lasted an hour, the right arm and leg became completely paralysed. The following day there was right facial paralysis, with deviation of tongue to the right side, and the patient by signs complains of pain in the left side of his head. There is facial twitching on the left side. Patella reflexes brisk, especially on right side; ankle clonus on right side, not on left. For the next fourteen days the patient remained at times unconscious, and at times conscious, when he would answer questions, but easily gets "muddled." Occasional vomiting; temperature normal. He died comatose.



CASE 2.—*Sarcoma of Left Hemisphere (Motor Area).* Photograph shows Vert. Sect. across ditto.

Post-Mortem.—An infiltrating tumour, which the microscope showed to be a round-celled sarcoma, had separated, and was growing amongst those fibres of the corona

radiata going to the left motor area. It did not extend lower than the level of the sylvian fissure. In the white matter in the centre of the right occipital lobe was a smaller tumour of the same nature.

CASE 3.—Encapsulated Sarcoma of Right Frontal Region.—

B. M—, female, aged sixty-one years. Previously healthy woman. Her present illness dates back about 6 weeks. She is incapable of giving any information herself, but her friends state that the main symptom that has struck them, and those around her, has been a gradually increasing want of interest in her surroundings, increasing to apathy, and latterly for the last week a loss of power in the left arm and leg, with some hesitation in speech. There were no other symptoms either of local affection or mental. While in the hospital patient was unconscious, and died comatose six days after admission.



CASE 3.—Sarcoma (Alveolar) of Right Frontal Lobe. Photograph shows Vert. Sect. of Frontal Lobe, showing Site of Tumour and Section of Tumour (Removed).

Post-Mortem.—A distinctly encapsuled and limited, firm, tumour, the size of a small hen's egg, and oval shape, was found in the right frontal region, lying just beneath the grey layer of the anterior surface. It pressed back upon,

and had somewhat involuted, the wall of the anterior cornu of the lateral ventricle, but had not opened into that cavity. It exercised direct pressure on the surrounding brain substance as far back as the level of the fissure of Rolando, thus accounting for the paresis of the left side. Microscopical examination showed the growth to consist of bundles of fibres, enclosing groups of large roundish cells; and, in fact, the appearance was that of alveolar sarcoma, the cells being arranged so regularly in some alveoli as to somewhat resemble the appearance seen in sections of secondary growths of columnar epithelioma, though lacking

the typical columnar or cubical shape peculiar to the latter.

(To be continued.)

THE REDUCTION OF FRACTURES OF THE LOWER END OF THE RADIUS, AND DISLOCATIONS BACKWARDS OF THE FIRST PHALANXES OF THE THUMB OR INDEX FINGER.

BY HUGH OWEN THOMAS (LIVERPOOL).

Fractures of the Lower End of the Radius.—Most, if not all, of the surgeons who have published their experience of fractures, have given us special instructions regarding the treatment of those of the lower end of the radius, and have expressed themselves in a manner which conveys to the student the belief that the treatment of these fractures is, above all others, the most difficult. The anatomy of this fracture has been thoroughly described to us by Dr. Gordon, of Belfast; but though his contribution to the etiological aspect of the question is so exhaustive, his contribution to treatment is not so useful. Do fractures of the lower end of the radius require special knowledge or special ingenuity? It is my belief that they require but "little knowledge, yet much wit." In the management of these fractures a handy, though untrained, man might, as the result of his treatment, give to the arm a better restoration than many a trained surgeon. If these fractures require a little more ingenuity than others in their management, they do not require that the practitioner's hand should be a very

experienced one; as the lines of deformity are always perceptible to the eye, and further, there need be no dread either of delayed union or of the fracture becoming compound. It is not so with fractures of shafts, for in these the line of deformity is hidden by swelling, and the surgeon has often to guess both at the exact site of fracture, and tendency of deformity, and to be guided a good deal by his memory of the normal outlines of a limb. The foregoing is an epitome of my own experience derived from observation of trained and untrained practitioners while treating these fractures. I watched for many years the extensive practice of an untrained gentleman, and, to do him justice, record here that he never failed to secure a perfect restoration of these fractures, and, if I were to say that I observed his treatment of two hundred cases, I should be vastly under-estimating their number; yet his treatment, guileless of anatomy, was only complete reduction and reasonably applied counter-pressure. I hold that the surgeon, who is a successful restorer of fractures of the lower end of the radius, is certain to be equally successful in his management of fractures of the lower end of the tibia. The conditions attendant upon the former are parallel with the conditions attendant upon the latter. The untrained practitioner whom I have referred to, as being so successful in his restorations of fractures of the lower end of the radius, was equally so in his management

of fractures of the lower end of the tibia up to the period of use, when, from his not taking precaution to centralize the weight of the body on the foot, several of his cases would show lapse of deformity. This was a pardonable omission when we consider that surgeons are not even yet instructed how to avoid this secondary deformity.

In the management of fractures of the lower end of the radius, several errors of treatment may happen. 1. Imperfect reduction. 2. Use of the limb being permitted, after complete reduction, before the fracture has thoroughly consolidated. 3. When the force producing the fracture further expends itself upon and injures the carpal bones, and use is permitted before the articulations are sound. 4. The limb not correctly slung. As regards the first error, imperfect reduction; some cases are presented to us with no deformity, requiring very little, perhaps no manipulation; others, with obvious deformity, are reducible by very slight extension; but the majority of these fractures require special manipulation if we wish to reduce them thoroughly, instantaneously, and with little pain. I now refer, of course, to recent cases. The method of performing the manipulation, so as to thoroughly reduce such fractures, is as follows:—

Mr. A—— suddenly enters the surgeon's consulting room grasping and supporting his left wrist by his right hand, and exclaiming, "Doctor, I have broken my arm or put my wrist out; I do not know which!" The doctor having assisted his visitor to undress, perceives at once, from the obvious deformity, that he has a fracture of the lower end of the radius to treat. After requesting his assistants to prepare two splints and a bandage, he places the patient in a chair, and assuring him that he will be subject to but very little pain, he grasps the patient's left hand with his right in the manner common in salutation, with this difference, that the back of patient's hand is in the palm of his hand, and the patient's thumb is on the back of the surgeon's thumb, while the surgeon's thumb is in the mid-palm of the patient's; in fact, a sort of reversal of the common act of salutation. The surgeon, with his left hand, grasps the patient's forearm close, just above the fracture, so that, while grasping the forearm, the palm of his left hand bears pressure upon the front of the radius, then at a mentally decided moment he very suddenly and dexterously, with the palm of his left hand, directs pressure upon the radius above the fracture in the direction of supination, simultaneously with which he gives the patient's hand and wrist, which he has in his right grasp, a twist in the direction of pronation, bringing these rapid manipulations to a sudden termination by counter-pressure with his left hand in an outward direction, and with his right in an inward direction. He has now completed the reduction, which occupied about a second, and the pose of the arm is so that the radius is mid-way between supination and pronation, wrist slightly flexed, and hand slightly adducted. The assistant now hands him two sheet-iron splints, the long or outward splint twisted, so that it corresponds to the outline of the normal symmetry of the forearm when in the mid-position of pronation and supination, and when the hand is in that of flexion and slight adduction, while the inner splint is twisted to make it fit the inner aspect of the forearm. These hollow sheet-iron splints are sufficiently wide that, when properly padded, the encircling bandage cannot exercise any appreciable pressure upon the upper line of the radius.

Imperfect restoration of this fracture is never a bar to usefulness, and is a pardonable defect, as being certainly in some cases unavoidable. The second mistake easily happens,

and is also a very pardonable one. I know that some of these fractures appear ready for use in four or five weeks. In others, though the fracture be palpably firm, yet, the callus not being sound, some degree of deformity may recur after use. The existence of that which I have described as the third defect is not excusable, because it ought to be perceived, and when present is curable. In these fractures, when the fore-arm has recovered with perfect restoration from deformity, its use is sometimes deferred by the patient contrary to the surgeon's advice, the sufferer expressing inability to use it with comfort, while the surgeon expresses the opinion that it is use only that will give him the ability to use it comfortably; in fact, the patient expresses a belief that he is not cured, the surgeon asserting the contrary. The end of such cases generally is that the patients seek other advice and become a rich harvest for bone-setters, passive-motionists, and for the new sect of qualified practitioners known as "massagers," and also for those qualified ones, who write treatises upon "surgical manipulation" and on "sprains," which grossly outrage our common sense, and, what is worse, dodge the principles of surgery.

I shall now give the reader an ideal case; but it is on "all fours" with many a real one I have had to contend with—a mere stereotype.

Mrs. A——, on entering the surgeon's consulting-room, informs him that she has come to have his opinion as to whether her wrist has been properly set. Exposing her left arm, she pronates it as well as she can, and shows the surgeon the lower end of the ulna, making the remark, "I believe sir, that bone is out!" The surgeon replies, "No, there is no dislocation." The patient, now slightly supinating the arm, remarks again, "But this wrist is not like the other, and my fingers are stiff; I cannot bend them like the fingers of the other hand!" The surgeon had noticed that there was some deformity; and, knowing that the deformity, simply, would be no bar to the future usefulness of the limb, he decides, before giving his opinion to the patient, to try and diagnose as to the actual fitness of the limb for immediate use. He requests the patient to allow him to approach her by a salutation with her left hand, in doing which he gives her a slight shake in the usual manner and inquires of the patient whether the act has given any discomfort. The reply is that it has caused some little pain. The surgeon next grips the lower end of the fore-arm well above the carpal joints; and, after requesting the patient to let the hand dangle perfectly free from muscular control, he suddenly gives the limb a few short, sharp shakes, and inquires if that has given pain. She replies in the affirmative. This answer the surgeon is prepared for; for, during this act of testing, her countenance had expressed her feelings, and her right arm was advanced to thwart the surgeon. The patient further informs the surgeon that compression of the hand against a fixed body causes uneasiness, while assisted extension gives some relief. The surgeon now, having come to a decision as to the condition of the part—namely, the existence of some deformity, and of an unhealthy condition of the carpal joints following a fracture of the radius four months old, before giving his opinion to the patient, he addresses her thus:—"Now, Mrs. A——, I am ready to give you any information which you may require; perhaps you would like to question me before I advise?" "Well, doctor, I want to know if my wrist is 'out,' and whether it can be 'put in,' and whether I shall ever get the use of my fingers again." The surgeon replies, "Supposing the joint were 'out,'

which it is not, it would not be any bar to your ultimately having good use of the wrist." The patient replies, "Then how is it I cannot use this hand like the other, and both wrists are not of the same shape?" The surgeon replies, "The reason of your inability to employ the wrist I have convinced myself of. The wrist-joint is 'tender,' 'unsound,' 'unhealthy,' strictly speaking, inflamed in a minimum degree. The same impediment would bar the use of a perfectly symmetrical limb. We first require health in the part, and then use after. Use, when unsoundness exists, will not lead to health." The patient replies, "Then, doctor, if we leave the arm in the shape it is, can I get the use of it?" "Certainly," replies the surgeon; "let us bring health to the part, and good, perhaps perfect, use must follow. A joint which is not mechanically correct is more useful, if sound, than another perfect in its mechanism, but unsound." The patient remarks, "Then, doctor, I distinctly understand that I can get the use of this arm without putting the joint back?" The surgeon interrupts her with a remark, "I assured you before that the joint was not out, and if it were it would not matter." "Well, however," the patient again remarks, "I'm glad I have not to be pulled about and hurt, as the gentleman who advised me to consult you told me that you would have to break it again. I came to you, though some of my friends wanted me to see bone-setter H—, or go to a 'rubber;' others advised me to try electricity; others salt baths. My own doctor said that if I would take chloroform he would soon work it right." The surgeon with a visibly elongated face, remarked, "You are on the 'mend;' you have only to exercise patience and give yourself a little more time, and sponge the wrist with warm water night and morning, and let the joint be fixed a little longer; and, in the interval between bathing, let the joint be fixed with a padded splint and bandage, and when in bed place the arm so that the hand is elevated at a level with the head, in order to diminish the blood in the part temporarily. This treatment must be continued with abstinence from use until a time has arrived when jarring the wrist and shaking the hand give no discomfort."

It is not an uncommon occurrence for a surgeon to be asked to restore the symmetry of a fracture of the lower end of the radius four or five weeks after the occurrence of the injury. I believe that this is not always possible after the second or third week without the surgeon's supplementing his manipulations by using the "Talipes" wrench, or some such leverage. By such extra means the surgeon can often restore normal symmetry, to a neglected fracture, some weeks after the accident. It behoves the surgeon, when using the wrench, to be careful that the fingers of the wrench do not span so far across the arm as to act upon the normal ulna as well as the abnormal radius.

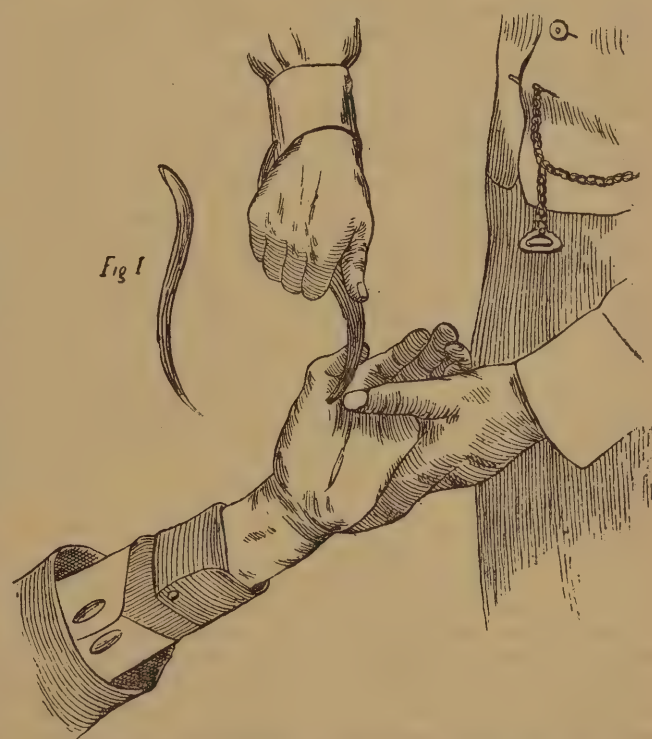
Some surgeons, when discussing these fractures, place among the category of errors the practice of bandaging the fingers. I am not prepared to say that it is theoretically and practically wrong to do so; yet, as any unavoidable defect of the fingers that may remain after treatment is invariably attributed by the patient to this item of treatment, and, as we have not much to gain by it, it is wise to omit it. It is of far more importance, though but little attention is given to it, to sling the limb by a mere "halter," over which the hand hangs somewhat adducted by its own weight. I have never myself applied bandages to the fingers when dressing fractures of the lower end of the radius, yet I believe that doing so is not an error in theory, nor leads to any harm

in practice, as it is very rare that fingers have been hurt. Bandaging prevents a certain amount of œdema, which, subsequently, it is by no means easy to get rid of, and soon impedes the use of the hand. The same annoyance follows the bandaging of a fractured humerus when the fingers, hand, and forearm have not also been bandaged.

Concerning the treatment of these most common of all fractures to be met with, the best average repair and restoration are secured by those surgeons who invariably give proper attention to making a thorough reduction; and who, when applying their fixtures, no matter of what form, leave plenty of latitude for their counter-pressing pads to act, and, furthermore, take care that the splints used are just sufficiently wide to hinder the bandage from interfering, by compression as it crosses the radius, with the restored form.

Dislocations backwards of the First Phalange of the Thumb of Index Finger.—Is there an infallible mode of reducing these dislocations? Certainly, but before I introduce the reader to that "mode," I shall give here a sketch of my experience. I have had opportunities for reducing very many of these dislocations, which had existed from a period of two or three hours up to one of two or three weeks.

Fig 2.



Whether the dislocation was that of the thumb or of the index finger, I never failed to succeed if the case was a recent one—say one of two or three hours' duration. The cases of longer duration were mostly those which other surgeons had tried and failed in, and where afterwards my own efforts also generally failed. I never, to reduce one of these dislocations, give an anæsthetic, yet I have succeeded at times where others had failed with its aid. I have tried all known methods, and many of them before they were generally known to the profession, and, of all the methods, tenotomy has been the most disappointing in my practice. The

reader will readily accept this as my opinion when I inform him that being determined to effect a reduction in the last case where I used tenotomy, all other plans having failed, I thoroughly performed the operation, subcutaneously dividing all resisting structures, yet I failed to reduce it, and had the mortification to see the thumb become gangrenous, and had to amputate at the joint. My failures continued for a long time before I bethought myself of applying to these dislocations a mode of operation which I was constantly applying to compound injuries of joints and fractures, if not immediately reducible. It is far better to apply a trustworthy plan, though it involves the compounding of the dislocation which is better than irretrievably injuring the part by delay and frantic efforts at a reduction, which is probably impossible. The operation, which must succeed, is extremely simple.

The surgeon, supposing the dislocation to be that of the first phalange of the left thumb or index finger, having in his possession a lever nearly the shape of the letter S, and a strong tenotomy knife, requests an assistant to steady the thumb or finger, while he, with his left hand, grips the patient's wrist. The surgeon now, with the tenotome or strong narrow bistoury in his right hand, inserts its point through the skin in front of the joint, and passes it over the head of the metacarpal bone, half-way through the strictures of the thumb, and between the articulations. Withdrawing the bistoury, he rapidly introduces in its place the narrow-bevelled strong steel lever, the end of which he hooks under the base of the first phalange bone, then depresses the handle, while the assistant extends the thumb, and guides it forward over the head of the metacarpal bone—the leverage being directed from behind forwards—just the reversed action of using the same lever for compound inward dislocations of the ankle. The construction of this lever is such that one end can be used for the smaller articulations, and the other end for the larger ones. The end suitable for a larger articulation could not be used for a small one, while the end suited for a small articulation, though possibly of use to a large articulation, would do some harm; it would unnecessarily indent the bone at its acting point. An assistant is not a necessary adjunct to the performance of this operation. The accompanying plate gives the form of the lever reduced one-sixteenth; fig. 2 shows the lever about to act.

TWO CASES OF POLYPUS OF THE CONJUNCTIVA.

By KARL GROSSMANN, M.D.

OPHTHALMIC SURGEON TO THE STANLEY HOSPITAL, LIVERPOOL.

CASES of conjunctival polypus are not of very frequent occurrence, if we exclude from their number, as we ought to do, all those warty excrescences which owe their origin to inflammatory processes. As a rule, it is the inner canthus, the plica, the caruncle, and the upper lid, from which polypi spring. In the following cases, which came under my notice within a few weeks from one another, the seat of the affection was the free surface of the conjunctiva of the lower lid:—

Case 1.—Mrs. F—, æt. twenty-nine years. She has always enjoyed excellent health, and had never suffered from any inflammation of the eyes or eyelids. Within the last five months the left eye became a little troublesome, in so far as the lower region of the lid felt heavier than before. The sight was occasionally blurred lately, and it seemed to her as though the eye did not close so well as

usual. On simply looking at the patient for the first time I did not notice anything particular, except that the left lower eyelid was bulged out in a marked degree, like in a case of hordeolum. The free margin of the lower lid did not touch the eyeball, but there was no redness or inflammatory swelling noticeable. In turning down the lower lid, an oblong tumour was found to be the cause of the apparent swelling of the lid. This tumour was semi-transparent, of a reddish grey colour, and had the shape of a flattened kidney bean. It was about eleven millimetres in length, four mm. thick, and six mm. wide, and sprang from the conjunctiva by a pedicle about four mm. wide and three mm. broad. This pedicle was situated almost half way between the free margin of the lid and the fornix, and about twelve mm. from the caruncula. By reason of the pressure of the lid, the tumour had adapted its shape to the convexity of the eyeball, which it touched when the lid was in its usual position. The closing of the eyelids could not be accomplished to perfection, and this had evidently caused a slight conjunctival catarrh, which produced a small amount of mucous secretion, thus accounting for the slight occasional obscurations of sight. When the lid was everted, and concentrated light was thrown on to the tumour, the jelly-like appearance of the latter was very conspicuous, as were also several bundles of thin but distinct blood-vessels.

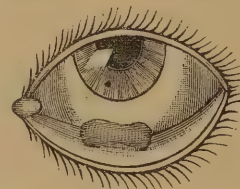


Fig. 1.

Fig. 1 gives a sketch of the tumour *in situ*. Its base has not come out well in the illustration, but its dimensions are pretty accurately represented. There was no doubt about the nature of the tumour: it was evidently a polypus analogous to those we so frequently find on the mucous membrane of the nose, and rare only in this locality. The tumour was excised without any difficulty, the only—and not unexpected—complication being a rather plentiful bleeding, considering the size of the growth. A very slight cauterisation with nitrate of silver stopped the bleeding easily, and after a few days hardly a trace of any wound could be seen on the conjunctiva. Microscopically, the polypus showed very nearly the structure of other mucous polypi, loose bundles of connective tissue, with small and large interstices. There was, however, a fair sprinkling of leucocytes to be found.

Case 2.—A few weeks afterwards, in February this year, a second case of conjunctival polypus came under my observation, almost exactly resembling the first. The patient, a gentleman of twenty-six, had noticed that his left lower lid was not as free and movable as before, and did not close so well. The history of this case was almost identical with that of Case 1, as was also the position of the tumour on the left lower lid. The only difference was that the polypus consisted of three lobes, a big one in the centre, and a small one on the right and left. The common pedicle was about three by four mm. in thickness. This polypus was a little thicker in appearance.

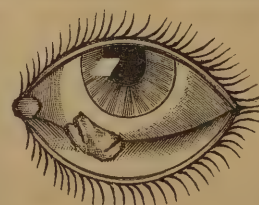


Fig. 2.

Fig. 2 gives a sketch of it. Its removal was a simple matter, not accompanied by any bleeding worth naming. Microscopically, it showed a denser and thicker connective tissue than the former, and may thus be classified among the fibrous growths.

ON THE ADVANTAGES OF PLASTER-OF-PARIS DRESSINGS AS A MEANS OF SPINAL SUPPORT.¹

BY LEWIS A. SAYRE, M.D., NEW YORK.

SINCE the days of Percival Pott, who first accurately described the correct pathology of caries of the spine in 1783, and who so strongly recommended the horizontal position to be constantly assumed during the entire existence of the disease—because by this position the diseased portion would be relieved from the pressure caused by the weight of the upper portion of the body on the diseased surfaces—I believe that there has been an entire consensus of opinion among the profession in all countries as to the correctness of this opinion of relieving the diseased parts from undue pressure as one of the most essential elements of successful treatment in this unfortunate malady. We all know that undue pressure upon any part interferes with its normal circulation by cutting off a portion of its blood-supply, and thus diminishing its vitality and increasing its tendencies to disintegration—such as caries, sloughing, and other necrotic changes—the result of *malnutrition*, simply from this obstruction to its proper nutritive supply. As I have before stated, the entire profession recognized the advantage of the *horizontal* posture, as diminishing this amount of pressure by taking off the superincumbent weight of the head and shoulders, which would have to be borne by the parts when the body was in the erect position.

But there is another element of pressure, even when the body is in the horizontal position, and which tends to increase this absorption and disintegration, and which has been entirely overlooked by the profession. I mean the pressure caused by muscular contraction from reflex irritation, even when the body is in the horizontal posture, and it therefore requires *traction*, or extension and counter-extension, to overcome its ill effects, even when the patient has had the benefits of the horizontal position. For this reason I have for some years past put all my smaller children, whose pelves were not sufficiently developed to apply the plaster jacket and jury-mast (to which I will refer hereafter), in the wire cuirass, with head extension. In this cuirass, with the head extension, they can be stood up against the wall and look out of the window for hours, and thus amuse themselves, or be taken to the park to drive, or transported any distance in a railroad car, without the slightest inconvenience or discomfort. In adults who are paralysed and are too large to carry in the cuirass, I make the traction from the head and heels by weight and pulley attachments. This horizontal posture, while it was of the greatest advantage to the local parts involved in the disease, was still a great detriment to the general health of the patient by the *in-door* confinement of the adult, and by limiting the muscular movements of the child when confined in the cuirass. It was to obviate this difficulty, and allow the patients the advantage of out-door exercise, that various surgeons in different parts of the world have invented and used different kinds of support to the spinal column, to prevent the deformity from increasing while the patients assumed the erect posture, and had the advantage of free exercise in the open air.

To attempt a description of all these various braces would be a useless waste of time, as their number is legion, and, with the exception of Taylor's, Banning's, and Allen's, most of them are of no practical good, many of them, in

fact, being absolutely injurious, not only increasing the disease and deformity, but at the same time giving the patient great physical agony, and sometimes even absolute torture. The spinal support of Taylor, which is altogether the best of any of the iron braces, and that of Banning and of Allen, are based upon the principle of removing the pressure from the *anterior* portion of the bodies of the vertebræ (which are spongy in texture and easily absorbed) by bending the body directly backward, using the "bos" as a fulcrum, and thus transferring the weight to the transverse processes, which are of a different textural composition from the *bodies* of the vertebræ, and not so liable to undergo interstitial absorption under the influence of additional pressure. Taylor's and Allen's braces are of great service in the treatment of Pott's disease, inasmuch as they prevent an increase of the posterior angular projection by removing the pressure from the *anterior* portions of the bodies of the vertebræ; but they do not give the same amount of benefit as the plaster-of-Paris jacket (hereafter to be described), which removes the pressure from *all part* of the vertebræ, *posteriorly* as well as *anteriorly* when properly applied. The principal objection, however, to both of these spinal supports is their mode of attachment. In order to be kept in position they have to be secured by a bandage around the body, called the apron, which has to be laced or buckled sufficiently tight to retain the spinal supports in a positively *fixed* position, and if they are not thus securely retained, they excite friction and chafing by their motion, and if the body apron is buckled or laced sufficiently tight to retain this exact position, it necessarily girdles the body to such an extent as to very materially prevent the full expansion of the chest, thus diminishing full inspiration; and to this extent at least they are injurious, as preventing proper oxygenation of the blood.

Banning's brace is superior to either of the others in its mode of attachment by elastic springs and the absence of the body belt, thus allowing of free expansion of the chest; but it is so very elastic and insecure as to afford but very little if any support in a case of spondylitis or Pott's disease, whatever benefit it may render in a case of lateral curvature. The Knight brace or crib, formerly used in the Forty-second Street Hospital for the Ruptured and Crippled, has all the objectionable features of the Taylor and Allen spinal supporters, without one single redeeming quality. I have tested the respiratory capacity of a very large number of patients (certainly over one hundred) with this spirometer, who were wearing at the time some one or the other of the braces above referred to, and in no single instance could they expire as much with the Taylor, Allen, or Knight brace upon them as when it was removed. And in every single instance where a plaster-of-Paris jacket was applied to the same patient the expiration, was increased without one single exception, in some cases this increase amounting to ten, twelve, fifteen, and even twenty cubic inches. In the Banning brace this difference in respiration was nothing like so marked, although it held the spinal column less securely than the Taylor or the Allen brace.

In the autumn of 1874 a poor child was sent to me from Chatham Center, Putnam County, paralysed in the lower extremities for some weeks before from Pott's disease of the lower dorsal and first lumbar vertebræ of three years' standing, the eleventh and twelfth dorsal spines being very prominent, with a very sharp angle at the eleventh spinous process. The child was carried by the father, being unable to stand even when held by the hands. He had the pro-

¹ Read before the Orthopædic Section of the New York Academy of Medicine, May 18, 1888, and published by permission of Dr. Lewis A. Sayre.

jecting sternum, the peculiar catching, grunting respiration, with the well-marked features in countenance and expression, of spondylitis or Pott's disease in its far-advanced stage. As the child could not stand erect while Mr. Reynders measured him for a Taylor brace (which was the instrument I used at that time in all my cases of Pott's disease), and as I always preferred the measurement by the flexible lead tape to be made to the spine when in the erect position, rather than in the horizontal posture, I requested my son to hold the boy up by the arms while Mr. Reynders made his measurements and applied his leaden tape to the exact curvatures of the spinous processes. As my son lifted the child from the floor I was struck with the marked change that took place in the curves of the spine, which became apparently much straighter, and the body more elongated, and the child immediately moved his feet, which he could not do before. He was then placed on his feet again, but, not being able to stand, was seated on the sofa, and as soon as my son let go of his hands his body dropped forward and folded together as before, with an immediate return of the peculiar grunting, catching respiration which was so conspicuous in his case, and which entirely disappeared every time that he was suspended by the arms.

As they were compelled to leave in the next train, and I had no time to apply my usual "turtle-shell,"¹ which takes some hours to complete, and as Dr. Yale, my assistant, was just completing the application of a plaster-of-Paris bandage to a child's club-foot, I told him to apply the same to this child's body, as we could do it more quickly than we could apply a "turtle-shell," while, if there should be any danger from respiration, we could easily divide it down the front, my object being merely to give the child some kind of support until Mr. Reynders could make the brace, and at the same time to protect the child from the danger of jar in travelling. My son stood on the sofa and held the child up by the hands, Mr. Reynders had him by the feet, and I pulled his red flannel shirt down so tightly that it fitted almost like his skin, and Dr. L. M. Yale applied the plaster bandages very rapidly around his entire trunk, commencing at the waist, going down to the pelvis, and reversing, going up to the top of the sternum and back several times, until we thought it was sufficiently thick to sustain him. At first I was much alarmed about his breathing, but as he hallooed quite loudly my fears were soon dispelled. We then laid him on his stomach on the sofa to dry while we went to

lunch; on our return to the office, you can imagine our surprise to find him standing at the window looking out into the street. The mother stated that he had got off the sofa and walked there a few moments before without assistance, a thing he had not done before for many months. The child seemed to be perfectly comfortable, but I was afraid to leave his entire thorax in this inelastic casing, and I therefore slipped a paper-knife beneath his shirt, and cut both shirt and plaster casing from sternum to pubes. I then secured the pelvic portion by a few turns of a roller bandage, and left the upper part gaping open, instructing the mother to secure it by tying three elastic straps on either side, which were cut from her rubber garters, and directed the parents to bring the child on the following week to apply the Taylor brace. The present arrangement was a mere temporary expedient, without the slightest intention of making it a permanent plan of treatment.

Mr. Reynders brought the Taylor brace the following week, as by agreement; but the child made no appearance, and, as I did not know the name or address of the people, I lost sight of them until March, 1875—nearly four months after their first visit. In the meantime, as I had given up all expectations of ever seeing the child again, I had given the brace to another child that it happened to fit.

¹ For some years before this, in cases of persons too poor to pay for a Taylor brace, I had been in the habit of applying as a spinal support what I call a "turtle-shell" of plaster-of-Paris. This was done by placing the child on the stomach and pulling the shirt down smooth, so as to have no wrinkles in it; a piece of flannel or any cloth of loose texture, like cheese-cloth, or an old towel, was cut so as to fit the back from the neck to the buttocks, and to extend two-thirds around the body, nicking it at the waist and other places where it might be necessary to make the adjustment accurate. Several of these were cut after the same pattern, and then dipped in a mixture of plaster-of-Paris and saturated with the plaster. Two assistants then gently extended the child by making traction by the arms and legs, and after the shirt had been pulled down smoothly, then plastered cloths were placed in position on the child's back and around his body, and a dry cloth or blanket of the same pattern was placed over them, and all these were secured in position by a nicely adjusted roller bandage around the whole body. The child was to be kept lying on the stomach until the plaster had hardened, or become "set," after which the mother could roll the child on his back and accurately fit a piece of elastic webbing to the open space in front, which, being laced in the centre, would accurately retain the plaster shell in its proper position on the back, and give the child a much more secure support and infinitely more comfort than any of the "Knight cribs" for which I had so frequently used it as a substitute.

In March, 1875, they came to my office just as I was leaving for my clinical lecture at Bellevue, and I took them in my carriage to the hospital and described the history of the case, as here narrated, to the class. The mother stated that the reason she had not returned according to her promise was because the child had been so perfectly comfortable all winter, running around the house the same as the other children, and she only came now because he had been bleeding from his belly for the last few days, and some of her friends had told her he had a cancer coming on his belly, although he seemed to be perfectly well. The child had grown quite stout, and was looking the picture of perfect health, walking around the room quite firmly. On removing his clothes, I found the front of his plaster jacket all stained with blood. The bandage securing it around the pelvis was exactly as I had put it four months before, except that it was exceedingly filthy. From about two inches below the umbilicus to the top of the jacket it gaped open, quite widely at the top, and was held together by the elastic ties the mother had sewed on. At the umbilicus there was a mass of very red exuberant granulations, which bled quite profusely, and which had been oozing blood for some days, and it was for this reason that she had returned. On removing the bandage around the pelvis, for the purpose of taking off the jacket, the source of trouble was readily discovered. In cutting through the shirt and plaster the day that I put it on I had left a *single thread undivided* just on the umbilicus, and, as the child grew and the upper part expanded, this thread irritated the umbilicus, causing a warty growth, which was very hæmorrhagic. I snipped it off with a pair of scissors and touched the base with nitrate of silver, and that was the end of it. I then scolded the woman for neglect, and told her to go to Mr. Reynders and be measured for a new brace, as I had given her other one away, and to return the next week without fail, as I wished to show the class how to apply a Taylor brace. I then re-applied his dirty jacket, and as soon as I had finished the bandaging the mother said, "Now, sir, he can stand again." I asked her if he could not stand when I had it off, and she said, "No, sir." I had not noticed that fact, and therefore immediately

removed the bandage and took off the plaster-cast, and sure enough the woman was right; the child immediately staggered on his legs, put out his hands to seize something to keep from falling, and could not or would not lift either foot from the ground. My assistant held the child up by the arms and I readjusted the jacket, and immediately he walked as before. This was to me a revelation, and I then and there prophesied that this was probably destined to be the future plan of treatment of Pott's disease. Dr. George, who was then a medical student and most excellent short-hand reporter, published this lecture in the *Philadelphia Medical Times* for April 10th, 1875. I told the woman not to go to Reynders for a Taylor brace, but to wash the child clean, get it a closely-fitting shirt, and bring it to my next lecture, and I would apply a proper plaster-of-Paris jacket to him.

This was done on the following Wednesday at a clinic, and was the first public exhibition of this plan of treatment. I next made a public demonstration of the treatment at the meeting of the American Medical Association in Louisville, Ky., in May, 1875. At the meeting of the American Medical Association in Philadelphia in 1876 I made a practical demonstration of the application of the plaster-of-Paris jacket in a case of Pott's disease. Dr. Alfred C. Post then remarked that "this method of treatment marked an era in the history of medicine," and moved a vote of thanks to me, which was carried without a dissenting voice.

In 1877 I made public demonstrations in Guy's Hospital, St. Thomas's, University College Hospital, and St. Bartholomew's, in London; Birmingham Infirmary, and twice before the British Medical Association at Manchester, the second lecture being in response to a unanimous request from the association, upon a motion made by Mr. Lund and seconded by Mr. Ernest Hart, secretary of the association, asking me to make the second demonstration. At this last lecture the room was insufficient to accommodate the audience, and they adjourned to the largest hall in the university, which was soon crowded to its utmost capacity, and for the ovation at the demonstrations I must refer you to the medical journals of that date both in England and in this country. In Liverpool, Cork, Dublin, and Belfast, at the different meetings of the British Medical Association, at the meeting of the International Medical Congress at Amsterdam (1881), and also at Copenhagen (1884), I made public demonstrations of the plan of treatment, and received an unanimous vote of thanks in each instance, and an indorsement of its superiority over any other plan yet devised. This is not the time or place to describe my method of applying the plaster-of-Paris as a spinal support, as that has already been so fully done in my published works. But some substitutes have been offered to take its place, such as silicate of sodium, the porous felt, leather, etc. The objection to the first is its want of porosity and difficulty of removal. The felt splint is also impervious to the air, on account of the gum that is in it, and it has not sufficient firmness to retain its form unless sustained by iron supports, and cannot be constructed in any part of the country by the ordinary physician independent of the instrument-maker, as the plaster-of-Paris jacket can. The same objections apply to the raw hide of Darrach, the leather jacket of Bartow, and the wire corsets of Roberts. They cannot be made except by the skilled mechanic, and cannot be compared to the plaster jacket for comfort and utility, even when made by the most accomplished instrument-maker.

Mr. Davy, of London, has also made some modifications

in my mode of applying the plaster-of-Paris jacket by laying the patient in a hammock, instead of partially suspending him, as I always do. The objection to this mode is that the body is bent too much in a backward curve, and also that the thorax is more compressed when the child is lying on its stomach than when it is partially suspended, according to my plan, which necessarily expands the thorax to its fullest capacity, and this capacity of thoracic expansion I look upon as of most vital importance, and, in fact, the restriction of this thoracic expansion is one of the principal objections to some, if not most, of the other spinal supporters. It is true that Mr. Davy has now modified his plan somewhat by cutting a hole in the hammock to let the head fall through, and then by having extension made by two assistants while the plaster bandages are being applied. But, as the child is lying with its face toward the floor, you cannot see the effect of your traction on its countenance, and therefore may apply it too strongly, or not strongly enough; and, as the child is often too young to talk, you can only be governed in your amount of traction by the effect produced in its countenance by the expression of either pain or pleasure. When applied as I suggest, the gradual traction can be continued until you reach the point of greatest comfort, which is easily recognised by the child's expression, and can then be securely retained until the plaster is accurately adjusted, when the retention in this position of perfect comfort will be permanent. The various substitutes that have been suggested to take the place of plaster-of-Paris—such as silicate of sodium, shellac, porous felt, gutta-purca, etc.—are all objectionable on account of their want of porosity, and therefore being impermeable to the air, whereas the plaster jacket is perfectly permeable to the air, as is seen in this experiment; by blowing the smoke into this tight plaster-of-Paris box, you see it emerging from *all* its parts, thus proving its porosity, which is of such vital importance in retaining the skin in a healthy condition and not interfering with the insensible perspiration, which is a point of vast importance. In cases of rotary lateral curvature, where the deformity has been allowed to progress to the point of requiring artificial support, there is no substitute that can be applied that will so well retain the body in the improved position which partial self-suspension gives it, and which can be worn with so much comfort to the patient as the plaster-of-Paris corset.

Conclusions.—That the plaster-of-Paris jacket and jury-mast in cases of spondylitis or Pott's disease, and that the plaster-of-Paris corset in cases of rotary lateral curvature, are altogether superior to any other instruments yet devised for the relief of these infirmities, and for the following reasons:

1. They can be applied in any place and by any competent physician with perfect success, without the intervention or aid of any instrument-maker. This to the country practitioner is a point of most vital importance.
2. They can be worn with perfect ease and comfort to the patient in all cases where they can be properly applied.
3. The plaster-of-Paris jacket and jury-mast retains the spinal column in a more quiescent condition, and relieves the inflamed parts from the pressure of the superincumbent head and shoulders in cases of spondylitis better than any other device heretofore employed.
4. That, being applied while the hands are over the head and the body partially suspended, the thoracic cavity is expanded to its utmost capacity, thereby increasing the ability for full inspiration better than can be done by any

instrument which is retained in position by girdling the thorax, either by fixed bands or by elastic straps.

5. That, being porous and permeable to the air, it does not interfere with the insensible perspiration, and is therefore infinitely more healthy than the shellac, gutta-percha, felt, leather, raw hide, silicate of sodium, or any of the other substitutes that have been suggested to take its place.

6. That it does not "breed vermin" or other filth, as has been charged against it, but is, on the contrary, more cleanly and more healthy on account of its porosity.

7. That, in cases of rotary lateral curvature, when the deformity cannot be overcome by any amount of lateral pressure until the column has been elongated—as was most conclusively proved by Dr. A. B. Judson in his beautiful experiments before this Academy some years since—the plaster-of-Paris bandage can be more accurately applied than any other material, and, being thus accurately adjusted to all of the irregularities of the body, and closely fitting it in every place, will retain the body in the improved position which partial self-suspension gives it better than any other advice, and be infinitely more comfortable to the patient.

From all these facts we feel justified in quoting the language of Mr. William Adams, of London, at the International Medical Congress held in Copenhagen in 1884, when he said: "The modifications in the plaster-of-Paris jacket which Dr. Sayre has recently introduced and exhibited to this meeting seem to have perfected the jacket as a mechanical support."

Special Articles.

VOLUNTEER MEDICAL REGULATIONS.

We have had numerous inquiries addressed to us asking for information as to the duties of volunteer medical officers, mode of appointment, uniform, stretcher requirements, etc. We find that letters of a similar kind have been sent to the *British Medical Journal*. In reply we have had to direct our correspondents to a number of books, as "The Volunteer Regulations," "Regulations for the Medical Department of Her Majesty's Army," "Queen's Regulations and Orders for the Army," "Manual for Medical Staff Corps," "Manual of Stretcher Drill," pointing out a paragraph here and a paragraph there, bearing upon the questions. These books are not accessible to all medical men. We have thought that it might be of service to volunteer regimental surgeons to group together from the above works the paragraphs bearing on volunteer medical work, as there is a growing interest in this department of our auxiliary forces, and volunteer surgeons are anxious now both to know and do their duty. Probably the time will come when we shall have an official manual; waiting for this, volunteer surgeons may be assisted by the following compendium:

PART I.

(1) Appointment of Medical Officers (Retirement).

1. Commanding officers will submit to the Secretary of State, for consideration, the names of candidates whom they recommend for appointment to the rank of surgeon.—[Par. 122, Sect. II., Part I., *Vol. Regulations*.]

[Medical officers desirous of appointment to volunteer regiments have their names submitted to the commanding

officer, who either himself appoints, or brings the names before a meeting of officers.]

2. An acting surgeon will be allowed for every corps which is not entitled to a medical officer of substantive rank.—[Par. 124 *ibid*.]

3. Corps entitled to a medical officer of substantive rank will, if they consist of six or seven troops, batteries, or companies, be allowed one acting surgeon, and if they consist of eight or more, two acting surgeons, in addition to the surgeon borne on the establishment.—[Par. 125 *ibid*.]

4. Additional acting surgeons will, on the recommendation of the commanding officer, be appointed in the proportion of one for every troop, battery, or company, on the express understanding that they are necessary, in order to ensure the attendance of a medical officer whenever the corps is practising with ball or blank ammunition, and on the distinct understanding that such attendance will be given by the officers appointed.—[Par. 126 *ibid*.]

5. The appointment of acting surgeons will cease whenever the corps to which they belong is called out for active service.—[Par. 130 *ibid*.]

6. A step of honorary rank (if not already granted while serving), with permission to wear the uniform of the regiment, will be granted to surgeons on retirement, after fifteen years of such services, provided they are recommended to the military secretary by commanding officers, through general and other officers commanding districts.—[Par. 87, Part I., Sec. II. *Vol. Reg*.]

(2) Uniform.

7. Medical officers of volunteer corps will wear the uniform of their respective corps, with the following exceptions:

Sword belt	} As for officers of the army medical staff of corresponding rank, silver being substituted for gold in the lace and ornaments on the belts and pouches.
Pouch belt	
Pouch with	

Instruments }
Medical officers of volunteer corps are permitted to wear the cocked hat, belts, and pouches at present in possession, until they require to be replaced.—[Par. 1044, Part IV., Sec. III. *Vol. Reg*.]

(3) Rank for Precedence.

8. The rank for precedence of medical officers in the volunteer force is determined by the same rule as that prescribed for medical officers of the army, except that acting surgeons always rank as lieutenants, irrespectively of the length of their service. Surgeons appointed before October 1st, 1887, will continue to rank for precedence as major.—[Par. 55, Part I., Sect. I. *Vol. Reg*.]

(4) Certificate of Proficiency and Examination.

9. Medical officers who have not served as such in the Regular Army or the Royal Navy, will, in order to obtain certificates of proficiency to enable them to earn the special capitation grant of £2 10s., be required to pass an examination on the organisation of field hospitals and bearer companies, in the rendering of first aid to the wounded, and the sanitary and other duties generally of a medical officer in camp, and on the line of march. This examination will be made before a Board of medical officers, convened by the principal medical officer of the district, and will be passed within one year of the officer obtaining a commission in a corps. Certificates of proficiency will be granted on Army Form E, 564.—[Par. 144, Part I., Sect. II. *Vol. Reg*.]

(5) Stretcher Bearers.

10. Officers and men of volunteer corps who have gone through a course of training and instruction in stretcher drill, as laid down in Sect. XIV., "Queen's Regulations and Orders for Army, 1885," will, on becoming qualified, obtain a certificate of proficiency on Army Form E, 596. Volunteer stretcher bearers of corps, as laid down in section above referred to, will wear the medical staff corps badge on their right arm from year to year, on the certificate of the medical officer of the corps, that they continue efficient. At the annual inspection of volunteer corps the corps stretcher bearers will parade and be inspected as such under the medical officer.—[Par. 517, Part I., Sect. VI. *Vol. Reg.*]

(6) Medical Officers in Camps with Regular Forces.

11. Medical officers will take with them their own professional instruments. They will be supplied with a field companion (a small portable medicine chest, to be carried by an orderly). The medical officer of a corps or provisional battalion will make requisition for the field companion to the principal medical officer of the forces.—[Par. 405, Part I., Sect. IV. *Vol. Reg.*]

(7) Duties of Medical Officers doing Duty in Volunteer Camps.

These have to be modified from the Regulations of the Medical Department of Her Majesty's Army.—[See above, Part I., Sect. III., Par. 55—282.]

12. A medical officer doing duty with volunteers in camp or quarters will report any insanitary conditions which may exist in the vicinity of his charge to the commanding officer, and to the sanitary officer, or in his absence, to the senior medical officer.

13. He will, in accordance with Section XIV., "Queen's Regulations and Orders for the Army," attend parades of the troops when inspected by a general officer, and under special circumstances any other parades when professional assistance is wanted. Under ordinary circumstances the attendance of a medical officer at rifle ranges and at target practice will not be required, but the address of the medical officer should be left, so that he may be sent for if required.

14. If in barracks, a medical inspection room will be provided; if in camp, a tent, in which men reported sick, and prisoners will be seen, and where medicines and instruments will be kept. The necessary furniture will be in charge of and accounted for by the corps occupying the barracks or camp.

15. In accordance with Section XIV., "Queen's Regulations and Orders for the Army," the name of every non-commissioned officer and soldier reported sick will be entered in a company's sick report, which will be furnished by the corps, in duplicate, to the medical officer.

16. The sick will leave camp for the inspection room at such hours as may enable them to reach the same before the time of morning visit, 10 a.m.

17. The medical officer will examine the sick, and send those he considers unfit for duty to the hospital, marking in pencil on the sick reports the word "hospital," and also the disease opposite the names.

18. Such of the sick as only require trivial dressings or medicine will be dealt with at once, and the words "medicine duty" will be marked opposite the names of each man, and they will return to camp.

19. When a soldier is reported sick unnecessarily, the words "sick duty" will be marked opposite his name.

20. Soldiers reported sick, who, in the opinion of the medical officer, are temporarily unable to perform all their duties, may be recommended for light duty for the day, but no such recommendation should cover more than twenty-four hours, at the end of which time they will either return to duty or return to hospital.

21. When an officer is placed on the sick list, or removed from it, the medical officer will, with as little delay as possible, report the circumstance direct to the officer commanding.

22. The medical officer will also at once report all cases of sudden death, or of severe accident, or the outbreak of infectious disease in quarters, direct to officer commanding, or to senior medical officer.

23. A daily state of sick will be sent to the officer commanding.

24. If there is a regimental cell, he will inspect it daily, and see each prisoner confined therein.

25. He will apply to the officer commanding for a non-commissioned officer or private to act as permanent orderly and messenger for all medical purposes. The orderly will keep the inspection room clean, and have charge of the furniture and equipment, and perform his duties under the orders of the medical officer.

Hospital Equipment.

26. A hospital tent or marquee is usually provided, which is under the charge of an orderly, sergeant, corporal, or private.

27. The medical officer must provide his own instruments. The regiment will provide one field medical companion. The surgical haversack, or surgical bag, will contain the following:

Morphia injection in stoppered bottle, and box with case, $\frac{1}{2}$ oz.
Sal volatile, 2 ounces
Graduated horn cup, 1
Lint, Antiseptic, 4 ounces
Loose wove bandages, 4
First dressing bandages, 3
Boric wool, 2 ounces
Isinglass plaster, 1 tin
One inch tape

Plaster, Adhesive on inch tape, 2 tins
Sponges in waterproof bag, 2
Tourniquets, Field, 2
Tourniquets, Screw, small, 1
Tourniquets, Esmarch's web, 2
Wax candle and matches.
Wire arm splints, with tapes and buckles, 2 pairs.
Orderly's improved dressing case, 1

28. During the camp the medical officer will instruct his detachment of two men per company. Those who have obtained certificates will be able to put in the regulation drills, and probationers will be prepared for examination in accordance with the schedule laid down by the War Office.

(To be continued.)

MONTHLY REPORT OF NEW PREPARATIONS, FOODS, DRUGS, INVENTIONS, ETC.

Extract Salix Nigra Liquidum (Hockin, Wilson and Co.).—Salix Nigra, or, in popular phraseology, "The Pussy Willow," a tree growing along streams in the Southern States of America, has long enjoyed a reputation as an anti-periodic tonic and stimulant. It has been extensively used in the States as a sedative in ovarian pain and for pain occurring at the periods. We have employed the extract made by Hockin, Wilson, & Co. in one-drachm doses in cases of this kind, and we are able to state that it is a useful uterine sedative. It has been employed with good effect by Mr. Fenwick in the treatment of gonorrhœa, and by others for nocturnal emissions, so that it may be regarded as a sexual sedative.

Iodia (Battle & Co., St. Louis).—This is the name given to a combination made from the green roots of stillingia, helonias, saxifraga, memispermum, aromatics; each drachm in addition containing five grains iod. potas. and three grains phosp. of iron. It is usefully employed as a general alterative, and is especially of use in the numerous derangements produced by the syphilis poison. Stillingia has been long used in the States by the blacks as a remedy for syphilis, and as in this combination it is found with the iodide, we have a double-barrel weapon to work with. Where desirable hyd. bichlorid. may be added. It is an agreeable and elegant preparation.

Bromidia (Battle & Co., St. Louis).—We have already expressed our opinion on this preparation. Increasing experience confirms our confidence in it as a useful sedative and hypnotic.

Syrup Picis Liquidæ (U.S.P.); Syrup Picis Liquidæ (Frazer's Formula) (Richardson & Co., Leicester).—Acting on the suggestion of Dr. Murrell, we have tried the syrup of tar in chronic bronchial affections, and having used some gallons of it we are able to confirm his experience. We give a preference to Dr. Frazer's formula as it is stronger than the U.S.P. product. We have a large number of bronchitic patients in the Halifax Workhouse, so that we have ample opportunity of testing its value. The expectoration in many cases had been very offensive, and here we derived considerable advantage from the syrup. It reduced the offensive smell and diminished the quantity of mucus. The syrup forms a good base, to which can be added at will any medicine deemed desirable.

Clinical Cases.

ROYAL ALBERT EDWARD INFIRMARY, WIGAN.

CASE OF PELIOSIS RHEUMATICA.

UNDER THE CARE OF WM. BERRY, F.R.C.S.I.

[For the notes of this case we are indebted to Mr. A. J. BARNARD, M.R.C.S. Eng., L.R.C.P. Ed., Senior House Surgeon.]

M. G—, æt. twenty-three years, servant; admitted January 22nd, 1888. *History*: She had been ill for ten days before admission, suffering from all the symptoms of acute rheumatism, having pains in the joints, and some swelling. Three days before admission the calves of the legs became swollen and brawny, and were covered with dark brown spots, varying from the size of a pea to the size of a sixpence. Her temperature on admission was 102.8° F. Both knees and ankle joints were swollen, and the right thigh and buttock and right elbow were very much swollen and cedematous, and there was tenderness on pressure. Dark brown spots on back and both legs; tongue brown and dry, and thickened fur in patches. The back part of tongue and throat were covered with aphthous ulceration. She assumed, in bed, the dorsal decubitus, and it was painful to her even to raise her head or make the slightest movement. Before this illness she had been strong and healthy.

Treatment consisted of fixing the right elbow by means of an angular splint, and applying lead lotion to the elbow joint and forearm; the thigh also received the same treatment, the lotion being applied warm in the form of a fomentation. Four grains of quinine sulphate were ordered

every four hours, and she was placed on milk diet and eggs. The throat was sprayed with lactic acid, and then mopped out with glycerine of borax. Six ounces of brandy were given daily, and lemon water to drink. No cardiac or lung mischief. Patient was very restless at night, and in great pain, so that an hypodermic injection of morphia was given. The temperature was never higher than 102.8° F., and usually ranged from 99° F. in the morning to 102° F. in the evening. The large masses of cedema gradually subsided, to be followed by fresh swellings and pain in the left elbow, arm, and left thigh and leg. About the eighth or ninth day after admission these swellings had disappeared, but the spots remained to clear up gradually afterwards. She was kept on a nourishing diet and stimulants, solid food being given to her as soon as her throat was better and she could take it. At the end of four weeks she was convalescent, but still felt some weakness, but we had her sent to Southport Convalescent Hospital.

Remarks by Mr. Berry.—This case was an exceedingly interesting one. I saw her in consultation with a neighbouring practitioner before her admission into the hospital. He had been treating her with twenty-grain doses of salicylate of soda every four hours, as she had from the commencement all the symptoms of acute rheumatism. After four or five days' treatment the calves became swollen and covered with dark patches and spots, although the joint pains had disappeared. He at first thought that the salicylate of soda had caused this. I was not aware of any such result from the taking of salicylate of soda, although I have seen a pretty good number of cases of acute rheumatism treated in this way. After her admission into the hospital it became apparent that these spots were purpuric in nature; at all events the swellings were due to effusions of lymph or blood amongst the muscles, as they were localised large swellings, of a brawny character, almost simulating abscesses. None of them suppurated. We did not have any fresh spots after her admission, but those that existed were of a dirty-brown character, such as we see in purpuric spots when they are being cleared away by absorption.

The nature of this affection is believed by some to be a form of rheumatism, by others a kind of purpura, and by a third class of observers as a scorbutic affection. Dr. Lieving says that it is really a variety of erythema in which cutaneous hæmorrhages and joint affections are prominent features. In this case no doubt we had symptoms of acute rheumatism, and super added in three days symptoms of purpura. We should look on purpura not as a disease *per se*, but rather as a symptom which may occur in any severe or prostrating disease.

Reviews.

Anæsthetics: their Uses and Administration. By DUDLEY W. BUXTON, M.D., B.S., M.R.C.P., Administrator of Anæsthetics in University College Hospital, etc. London: H. K. Lewis, Gower Street, 1888.

VERY few medical men perhaps, excepting those who have qualified during recent years from some large school attached to an hospital, have ever had any scientific instruction in the administration of anæsthetics. The knowledge formerly only to be acquired by practice and experience is now obtainable either from recognised teachers, or from such a handy manual as Dr. Buxton has written. That such a

knowledge is of paramount importance, nobody can doubt, and yet how often are anæsthetics administered by nervous or over-confident hands to the detriment of the patient and annoyance of the operator. Under the heading, "Choice of an anæsthetic," Dr. Buxton says: "It cannot be too strongly impressed upon the mind that children run a risk, and probably as great a risk, in chloroform narcosis as do adults." The chemical and physical properties of the various anæsthetics are discussed seriatim, as well as their physiological action on the vegetable and animal kingdom, and finally in the human subject. With regard to nitrous oxide, the only real danger seems to be syncope, therefore there is risk in cases of great vascular feebleness, and where, owing to the insufficient narcosis, the pain of the operation is felt. The chief troubles found to occur during ether narcosis are spasm of the rima glottidis, or of the chest muscles. For the subsequent vomiting, teaspoonfuls of hot water are recommended. Ormsby's inhaler is objected to for the following reasons:—It produces great discomfort by allowing undiluted ether vapour to impinge upon the larynx; the sponge is very liable to freeze hard, and so no evaporation of ether takes place; it occasions great struggling; it is wasteful of the ether. The author has improved upon Junker's inhaler for chloroform, by substituting a foot bellows for the bag vaporiser. We are warned that the great danger of chloroform narcosis is reflex inhibition of the heart, therefore shock, cold, and terror, are to be avoided by not uncovering the patient until anæsthesia is complete. Amylene vapour must be of such a strength as to induce anæsthesia in three minutes, else, however long it is persevered in, it will fail to produce an effect. The after-effects of ethylene are stated to be fewer than after chloroform. After hydrobromic ether, vomiting is very severe—this anæsthetic cannot safely be given in long operations, nor can it be given in accouchement, as it causes muscular spasm. In the chapter on anæsthetic mixtures we read that the main objection to them is that the substances employed in their formation do not evaporate in the ratio in which the fluids are mixed, and hence it is impossible to be quite sure what percentage vapour of chloroform is being inhaled. That a false sense of security is often conferred by the A.C.E. mixture is beyond cavil. The inconvenience and great struggling noticed by Kappeler after the exhibition of morphine before ether have not been noticed at University College Hospital. With regard to chloroform in labour, the author denies that the mortality among mothers and children is increased, that it protracts the labour, or that perineal rupture is more common. Convalescence is actually hastened by its administration, as the nervous system is protected from shock. As to its influence on *post-partum* hæmorrhage, opinions seem to differ. In a note on p. 20 we read: "In my private practice I have met with cases of women, who, after trying chloroform, preferred to take ether in their confinements, stating that it produced more exhilaration and general feeling of well-being, while it assuaged their pangs more efficiently than chloroform." The commonest symptoms of cocaine poisoning are stated to be those of cardiac depression, dryness of the mouth and fauces, elation and loquacity. In respect to the medico-legal aspects of giving anæsthetics, we read that most carbon compounds so employed possess the property of exciting sexual emotions, and in many cases produce erotic hallucinations. Though the work is of so thorough a character, several small omissions may be noted—thus, no mention is made of etherisation per rectum, by rapid respiration, or by

semi-intoxication with whisky, aided by opium. The local anæsthetic properties of iodoform are also omitted. Anæsthesia through a tracheotomy aperture is only just alluded to; and though Trendelenburg's tampon is mentioned, the method of procedure is not described, nor is the commoner method of simply plugging the top of the pharynx with a piece of sponge. Mr. Lewis will find Dr. Buxton's manual a valuable addition to his practical series.

Short Notices.

An Introduction to the Study of the British Pharmacopœia.

By RAWDON MACNAMARA, F.R.C.S.I. London: H. K. Lewis, 1888.

THIS little book is really intended for the use of the students attending Professor Macnamara's lectures on *Materia Medica*, and is what it pretends to be, a brief summary of some of the leading facts in the *Pharmacopœia*. The student who will conscientiously master this introduction, will start with an equipment which will be of the utmost value to him all through his subsequent career.

Aids to Dental Surgery. By ARTHUR S. UNDERWOOD, M.R.C.S., L.D.S. Eng. London: Baillière, Tindall and Cox.

IN this aid Mr. Underwood has endeavoured to condense all that relates to the department of the science of dental surgery capable of such treatment. He truly observes—"The manipulative part must be learnt at the operating chair." Knowing the requirements of students, the author has succeeded in the object he had in view. The chief aim of these aids is to bring to a focus the student's knowledge, otherwise they would be mischievous, and their appreciation by the students is testified by their steady sale, and by the increasing number of special aids.

Notes on Diseases of Women. By JAMES OLIVER, M.D., F.R.S. Ed. London: Hirschfeld Brothers, 1888.

ON looking at the Table of Contents, one would expect to find a volume of at least 500 or 600 pages, in place of one of 135. The Table of Contents is more pretentious than the work itself. The author has condensed his chapters, of which there are altogether thirteen. Cancer of the uterus is disposed of in about nine pages; inflammation of the mucous lining of the Fallopian tube in less than five; so that it is evident these diseases are not very exhaustively treated of. The best chapters are those on "Menstruation" and "Sterility from a physiological standpoint," and these may be read with pleasure and profit. We cannot have too many facts throwing light on menstruation, because the true nature of the catamenial discharge is still conjectural. Dr. Oliver's observations will be generally received as sound, though they do not throw any additional light upon the process. He takes a philosophic view of the menstrual function, and the whole train of events connected therewith, and the philosophic bent of his mind is also indicated in his observations on another abstruse subject—viz., sterility, about which so much has been written, and on which so much will yet have to be written, before the subject is thoroughly understood. Dr. Oliver would not lay the blame on women in cases of sterility, as is too often done.

The Provincial Medical Journal,

AUGUST, 1888.

THE organisation of the Volunteer Medical Service is rapidly proceeding, and, as we pointed out in an article on the subject, it has followed the general law of evolution. The latest outcome, the reserve of volunteer medical officers, has given rise to some adverse criticism on the part of the *British Medical Journal*—criticism which we venture to think reveals an amount of ignorance on the history of the volunteer movement, which does not require a serious reply, and criticism, moreover, which comes too late. The growth of the volunteer medical department has been largely dependent upon the support given to it by surgeons in the regular army; the medical reserve has not been brought about by the volunteer medical officers themselves, but by the administrative portion of Her MAJESTY'S Regular Army. The medical reserve does not even go so far as some surgeons in the regular army would go. The *British Medical Journal*, October 31st, 1885, contains a review of a pamphlet by Surgeon-Major EVATT, "On the Organisation of the Volunteer Medical Service," and that pamphlet afforded an ample peg for the editor to hang his animadversions upon, and to condemn, but the only observation made upon the pamphlet is, "There is no doubt that much needs to be done to render the Volunteer Medical Service efficient." Surgeon-Major EVATT'S proposals go far in advance of what has been granted, though many of his recommendations have been adopted. Let us see what his proposals were:

1. He proposed that the whole of the existing volunteer surgeons should be grouped in one general list in the army list, and placed with the army medical staff in the army list, and that all regimental surgeons should be also shown in their regimental lists, just as the guard surgeons, who are now gazetted in two places.
2. That there should be a volunteer medical staff, consisting of a number of volunteer surgeons, to officer the bearer companies and field hospitals of the medical staff corps. That there should be in each regimental military district a bearer company and a field hospital for the district brigade. This has been started, and we have now bearer companies at London, Leeds, Glasgow, Edinburgh, etc. A volunteer medical staff corps is in actual existence.
3. He further proposed that a brigade surgeon of volunteers should be commissioned in each military division to command the whole of the volunteers of the district, under the principal medical officer of the regular forces in the district.
4. He even went so far as to suggest that an honorary deputy surgeon-general of volunteers should be allowed to each district to be the honorary head of the medical volunteers of the district.
5. He actually had the courage to propose that a certain number of volunteer surgeons should receive the high honour of being appointed honorary surgeons to the QUEEN.
6. He was so thoroughly iconoclastic as to make the following statement: "The time has now arrived to do away with such petty

distinctions as gold and silver lace; the uniform of the volunteer medical staff and volunteer medical staff corps should be identical with the regular medical service. Gold lace to be worn, and the only distinctive mark to be the letter V on the shoulder." His pamphlet further deals with such subjects as retirement, rank, instruction, certificates of proficiency and efficiency, and he actually asks that the power should be granted "to offer honorary volunteer medical commissions to specially chosen civil medical men as field consultants in war time in medicine, surgery, and in sanitary science." On this point he says, "A system exists in some foreign armies of commissioning the leading men amongst the civil profession of medicine as consultants in war time in medicine and surgery, and there seems to be no reason why it should not work fairly in our army. It is our interest to place at the disposal of the armed people every aid which modern science can bring forward to assist in achieving victory in war. . . . It is our aim and our interest to link ourselves in the fullest way with the civil profession in medicine." His pamphlet further deals with volunteer war aid for the Army Medical Service. In the second part he says, "I have dealt with the question of the organisation of a medical department for the volunteer forces so as to place that service, as far as medical matters are concerned, on a completely independent footing, so that in case of foreign war, draining the country of all the regular medical service, the volunteer force could take the field in England fully equipped as regards ambulance arrangements. But quite apart from this home defence duty of the volunteer service, it is most easy so to throw open the door of the volunteer service and to utilise its organisation, as a frame-work, to enable a contingent of trained medical aid to take part in our foreign wars." He then sketches an outline of how this might be done, what the qualifications and terms of employment should be, the class of men he would expect to get, concluding his instructive and broad-minded pamphlet in the following words: "Nothing now remains to be said save to explain that this paper is written to endeavour to weld the medical service of the army with the civil profession, so that war efficiency may be achieved by conjoint action. However, much at first sight it may seem to be a relinquishment of rights, and a sharing with those not in our own special corps the high privilege of rendering good service to the nation in war, we must conquer such a feeling, and stand by this one principle, that the interest of the army and the nation are one and identical."

This is high ground to stand upon, and can hardly be reconciled with the views put forth in recent leaders in the *British Medical Journal*. Surgeon-Major EVATT'S pamphlet was published in 1885, and has been widely circulated, and read. We have not seen any repudiation of it by his fellow officers in the army, and, as we have said, the *British Medical Journal* did not attempt to criticise his proposals at the time. The Volunteer Medical Corps owes its present position to medical officers of the Regular Army, and Surgeon-Major EVATT, though he has done an enormous

lot of work to assist in the building up of this corps, has not been the only army surgeon who helped to consolidate it. The civil profession have no desire to injure the Regular Army Medical Service; their present position has been forced upon them by the march of events. The Volunteer Medical Service, after twenty-five years of existence, is now simply obtaining the same degree of recognition extended to the militant portion of the auxiliary forces; and, unless we desire to hinder the development of our Volunteer Army, we *cannot* refuse to assist the Government in their efforts to provide for grave national emergencies, by placing the medical department of that service in a state of efficiency.

WE have published several articles dealing with the subject of antiseptics in general midwifery practice, and notably, in the *Provincial Medical Journal* for July, 1887, p. 315, we laid down our views, derived from a considerable personal experience, that the antiseptic wave would soon pass, and that rational medicine would again assert itself, with a return to the old methods which have proved so satisfactory in the hands of the older school of accoucheurs. In the *Provincial Medical Journal* for October 1st, 1886, we published also a paper dealing with 3,435 consecutive labours, in which the following passage occurs: "I think we have got over the day when it would be considered a heresy to question the use of the spray. My patients have not been delivered under the spray, nor are they irrigated in the manner suggested by many eminent authorities. I hold it to be impossible to guard in ordinary practice against germs; I hold it to be unnecessary to inject every woman with a solution of perchloride of mercury, or any other antiseptic, in every labour case. By all this manipulation we are encouraging meddling midwifery, and sacrificing the greatest factor towards recovery—physiological rest. I have perfect faith in the theory of microbes, and am convinced of the necessity, in certain cases, of resorting to vaginal injections, which should be given by the obstetrician himself, but I strongly protest against all the newer theories and practices with which we are threatened. I hold that absolute cleanliness is a sufficient safeguard; and as we can obtain such results in our workhouses, I see no reason why we should change." At the International Medical Congress, London (*Transactions*, 1881, vol. 10, p. 322), on "Maternal Mortality in Workhouses," Dr. MOUAT told us what could be done among a class almost the very worst for confinement. "In 373 of the provincial workhouses," he said, "and in five of those in the metropolis, representing 25,198 accouchements, there was *not a single death* in a decade. In 135 others, two of which were in the metropolis, there was one death in each—13,110 deliveries in all." Here is a record in pre-antiseptic days, and can it be beaten? It would be useful to inquire into the system by which such results were obtained. The figures are beyond dispute, and should offer some food for reflection. We are tempted to return to this subject again in view of the discussion at the Obstetrical Society, on July 4th, on Dr.

BOXALL's paper on "The Conditions which favour Mercurialism in Lying-in Women, with Suggestions for its Prevention." It is matter of history that numerous women have died after injections with corrosive sublimate, and in consequence of the injections. This is not disputed. Had these women been left alone, or been irrigated with pure water, it is not too much to say they would not have died. In the process of experimentation with this form of antiseptic we have become more careful, reducing the strength from 1 to 500 to 1 to 1,000 or 4,000, with the latter strength only securing advantages which we venture to say pure water would give.

This is the age of slang, and there is a kind of medical slang in fashion just as there is a slang in the racing world. The word "antiseptic" belongs to the slang class of word. It is bandied about, and we are told that "an antiseptic was used, don't you know. The patient recovered." Now to define the word, or the agent, we have to come to scientific ground, but here we are at sea. Experiments tell us that the relative value of these various antiseptics, as permanganate of potass, carbolic acid, sanitas, menthol, corrosive sublimate, in killing spores, is very varied. Corrosive sublimate stands high, but with this objection, that to kill the spore, using a proper strength of solution, you have first to kill your patient. The practice or custom of using an antiseptic injection is most varied. It is given by the nurse, in an atmosphere laden with germs, whilst the patient is lying in blankets and on a bed which has never been scoured, perhaps, for years. It is given perchance once a day, as a matter of routine; the vagina is not sealed up afterwards, and this routine antiseptic washing is done just as the African repeats a "mumbo jumbo" against the evil eye. The mystic word "antiseptic" takes the place of the charm or spell of our ancestors. The discussion at the Obstetrical Society offers us hope that we are returning to the reign of common sense. We are glad to see that a few speakers had the courage—not always observable in scientific men when fashion holds the reins—to protest against the indiscriminate use of vaginal injections after labour. We are discussing now what has been discussed in America at the New York Academy of Medicine in 1886. It may strengthen the consciences of those who feel that the use of indiscriminate vaginal injections are wrong, but who do not care to state it openly, to have the opinion of one of the foremost obstetricians in New York—Dr. FORDYCE BARKER—on their value. Dr. F. BARKER replied to an elaborate paper by Dr. F. GAILLARD THOMAS, on "The Treatment and Prevention of Puerperal Fever," in which Dr. THOMAS urged the same views we are now hearing in England. Dr. FORDYCE BARKER laid down the following physiological proposition: "No treatment which interrupts the normal physiological processes—such as the retrograde metamorphoses of involution, the fatty transformation of the component fibres of the uterus, or the cicatrization of its internal surface by the exudation of organizable lymph, and the development of a new layer of mucous membrane, or the healing of traumatic lesions—can be justified unless

positive symptoms, now well understood in science, demonstrate their necessity." This is a proposition true in a surgical and physiological sense. Dr. BARKER asks: "Can it be true that the process necessary for the birth of the human race is always attended with the development of a deadly poison, whose malignant efforts must inevitably prevent the spontaneous and kindly healing of such little traumatisms as result from the process, and that therefore it is the duty of the accoucheur to take preventive measures of the character proposed? Does every parturient woman, in performing the function of maternity, like the scorpion that carries in its tail an agent for suicide, if death is threatened by fire, physiologically generate an equally fatal poison in a corresponding locality, which the obstetrician must guard against by means that are most inconvenient, alarming, and not altogether free from danger." There can be only one rational answer to these questions. What has been Dr. BARKER's practice? He tells us he had been in the habit of using vaginal antiseptic injections, but at the time of the International Congress in London he happened to be seated at a dinner next to Dr. THOMAS KEITH, and had a very interesting conversation with him as to the use of antiseptics in ovariectomy. Dr. BARKER tells us of his conversation: "What he said was very suggestive, and led to a great deal of subsequent reflection on my part as to the use of antiseptics in obstetrics. I recalled to mind the fact that often in my practice I had seen disturbances and interruptions of puerperal convalescence the first week after labour, and it occurred to me whether this might not be due to the carbolic acid; and the following autumn I decreased the proportion of the carbolic acid one half, and thought that my patients did better. On further reflection on the subject I said to myself that carbolic acid, even in the larger proportions which I had formerly used, was not strong enough to destroy the micro-organisms. Is it not possible that nature has wisely arranged to furnish the best fluid for constantly bathing the bruised and lacerated tissues of the parturient canal in the much-maligned lochia? Are not absolute rest and freedom from disturbance of the tissues much more favourable to their restoration than any washes that can be used? Since that time I have considerably surprised nurses by directing that no injections should ever be used unless specially ordered. It is scarcely necessary to say that absolute cleanliness was strongly enjoined, and that not a spot of blood either on the bedding or on the clothing of the patient should be found." Dr. FORDYCE BARKER has had no reason to regret his change of practice. Lying-in hospitals have been putting their houses in order, and consequently reducing their puerperal mortality. One method of action being followed with a bigoted devotion, a claim is made that the lower mortality is due to this action alone, upon data which, to our mind, are quite insufficient. We have to look not only to antiseptic vaginal injections, but to other causes, to explain the results. We hear a good deal of what is called *progress* in the obstetric art. The words of the lamented MOXON are here very applicable: "Beware that word," he

said, "There is no such thing as progress, except for conveyance from place to place. All improvement is development; progress is a leaving of what is behind, and a pressing forward to some mark. But we must not leave what is behind; and we have no mark to press to. If you turn to those few great medical discoveries which we daily find true to Nature—vaccination, Bright's disease, Addison's disease—you will see they were not made as "progress," but rather as backward steps to old, simple, natural truth, which had been neglected or forsaken because such sober truth did not suit the big hopes and wishes of some chimerical aim." These remarks are applicable to progress in midwifery along the antiseptic line.

It would seem almost impossible to say anything fresh or original on the question of insurance; the subject has been so much written about that the theme has been exhausted. Dr. BENJAMIN LEE, Secretary of the State Board of Pennsylvania, in spite of the enormous literature, and the old-fashioned view above expressed, has contrived to start us on new ground, and to give us some new ideas on what insurance should do. In the *Medical Bulletin*, July, 1888, may be found the full text of his paper, an analysis of which we present to our readers. Dr. LEE tells us that the gigantic development of life assurance in modern times has astonished all thinking men; its palaces form the chief ornaments in the streets of our cities, and its agents are omnipresent. The good accomplished, however, depends on the fact that death must first take place, before the benefits are reached. In reality it is a misnomer to speak of life insurance; it should be death insurance. By just so much as a man's life is shortened is the value of the pecuniary provision which he makes for his surviving family increased. The man who dies within a year after taking out a policy makes a better thing of it, from a business point of view, than the man who lives on for twenty or thirty years, paying his premiums every year. This eminently useful form of death insurance is not enough. What is really wanted is something which will prolong life, protect life, keep sickness away, and keep death at bay, so that all the consequent misery and suffering may be spared. He tells us how this may be done; and here he falls back upon experience derived from Scotland, experience which has stood the test of time, though we regret to say the Scotch system has not been pushed in England with the vigour it deserves, nor is the work sufficiently known. Ten years ago there was started in Edinburgh a society called the Sanitary Protection Association. The objects were as follows:—1. To provide its members at moderate cost with such advice and supervision as shall insure proper sanitary condition of their dwellings. 2. To enable members to procure practical advice on moderate terms as to the best means of remedying defects in houses of the poorer class, in which they may be interested. 3. To aid in improving the sanitary condition of the city. Each member is entitled to the following privileges:—1. An immediate report by the inspecting engineer of the association on the sanitary

condition of one dwelling or property, with specific recommendations, if necessary, as to the improvement of drainage, water supply, and ventilation, and a report on the water by the analyst. 2. An annual inspection of his premises, with a report as to its condition. 3. Occasional supplemental inspection. 4. Other reports, on payment of a very small fee, on property to be hired or purchased, on public buildings or schools, dwellings of the poor, etc. During one year 612 inspections were made, amongst which were 100 country houses. Of the latter, 70 per cent. were found to have direct communication existing between their drains and the interior of the house; and 80 per cent. had their water storage more or less faulty. The Edinburgh system was adopted at Newport, R.I., in 1878, with satisfactory results. Dr. LEE desires to spread in America the Scotch system. We want it as much in England, and should have branches of either the Edinburgh or London Association in every English town. The nature of the work undertaken by the inspectors may be gathered from a few items, and from the questions which they try to solve at their inspections.

(a) Are the sanitary surroundings of the house perfect? Do the trees and shrubbery permit sufficient exposure of it to the sun?

(b) Is the water pure and drinkable? If from a well or cistern, has it connection with the external air?

(b1) Is there direct connection, for cooking and table use, where city water is employed, between the main and the kitchen?

(c) Is the cellar dry, well ventilated and free from decomposing matter which may give forth seeds of sickness and death, and has it a drain? This drain must be wholly unconnected with any sewer.

(d) Has every bed-chamber free ventilation and direct means of communication with the external air?

(e) If contagious or infectious disease has occurred in the house, have the sick-chamber, etc. (bedding, wearing apparel, curtains, carpet and upholstered furniture), been thoroughly disinfected, and the wall-paper removed?

(f) Has each water-closet means of external ventilation, and not into an entry or bed-chamber?

(f1) Is provision made for ventilation of the interior space of the water-closet by a current of air flowing through the same to a ventilating pipe or flue, passing above the house top, and independent of the soil-pipe or its extension?

(g) Are the soil-pipes in a sound condition and easily accessible for examination? Are they of iron, with lead-plugged joints (the only true condition for a properly constructed soil-pipe)? Or are they of lead? And if of lead, have they been in the house for a number of years, and thus perforated with holes through which sewer-gas escapes into the house?

(h) Has the soil-pipe a proper vent through the roof?

(i) Is the soil-pipe, in its exit through the foundation of the house, of iron or of earthenware? If of the latter, is it broken off in or just outside of the foundation, so as to allow the sewerage-matter of the house to find its way throughout the foundation (a condition which is almost always found to exist where earthenware pipes are used)?

(j) If there are set bath-tubs, basins or wash-tubs, are they securely trapped? Is the kitchen sink safely trapped? It must not be forgotten that the ordinary bell-trap does not perfectly exclude sewer-gas, which its water absorbs and transmits, and that the S-trap is liable to be "siphoned," or emptied by inward suction, so as to permit the escape of gas into the house from the soil-pipe or drain.

(k) Is the cess-pool near the foundation wall? Is the cess-pool a loose one? And is there any overflow, or leakage into the foundation, cistern or well?

Householders are incompetent to answer these questions intelligently. Medical men are interested in the extension of this system of true life insurance, and should give their support to the aims and objects above set forth.

BAD laws for years exist. Some gross case of injustice happens, and there is a sudden awakening, and the bad law is at once repealed. It is the proverbial last straw which breaks the camel's back. We have a case in point. Dr. HIME acted as Medical Officer of Health for Bradford for five years, with ability, and to the satisfaction of the ratepayers of Bradford, and—the best test—to the satisfaction of the medical men of the town. He held office only for five years; re-election was necessary. Without justification, and almost without warning, his re-election was opposed, because he offended some of the sanitary committee. He is accused of want of tact, whatever that may mean! Shall we interpret it in its worst sense: that he showed *trop de zèle*; that he did not care whose property he condemned; that he even went so far as to pronounce judgment on property belonging to members of the committee. He was not subservient, and he would not be a tool. His efficiency is vouched for even by the committee which voted for his non-election. He is confessed to be an efficient officer; he is even praised. The committee profess to have regard for him; but to this Dr. HIME may reply *more Hibernico*, "You told me you loved me so dearly; but *why* did you kick me downstairs?" Could there be any greater satire upon our present system of appointment of medical officers of health than this disgraceful affair? Here we have a competent medical officer of health, without just cause, and without fault, deprived of his appointment; compelled to commence life again, either as a general practitioner or consultant, or to seek another appointment—the latter course being almost excluded, for "the burnt dread the fire." The case is well worth the attention of Sir LYON PLAYFAIR, and it is not too much to expect that we may hear of it in the House of Commons. We have long urged the absolute necessity of permanency of tenure—during good conduct, good health, and efficiency—for medical officers of health, if we really would place our health service on a sound footing. What man, possessed of experience, will accept office on such precarious terms as those offered? It may be possible by a policy of masterly inactivity for a medical officer of health to retain his position, and to secure re-election. An officer subservient to his committee, who is willing to connive at violations of our sanitary laws, to certify that unhealthy houses are healthy, to draw a salary and do nothing, is hardly the class of officer the ratepayers of any town want. It is a question for the ratepayers and for the public, and we hope at the next municipal election the Bradford ratepayers will mark their sense of the injustice done Dr. HIME at the ballot boxes. The local question sinks into insignificance when compared with the national question. We are spending some millions on our sanitary works; we profess to be anxious to prolong the lives of the

people by securing for them healthy homes. Without efficient medical health officers all this expenditure is simply waste. It is a mere sham to elect a medical officer of health who does nothing to rectify abuses. Bradford furnishes a glaring instance of the evils of the present system. We do hope that some good may come of it, even at great personal hardship to Dr. HIME. It may be but the beginning of the end.

Annotations.

"Forsan et hæc olim meminisse juvabit."

THE TRAINING OF NURSES.

How many nurses break down in the process of training! It is not fair to generalise from personal experience, but we have known a very considerable number who have had to succumb to certain methods of training. When we have inquired into the system, we do not wonder at it. Why should probationers have to do menial work? Why should they have to scrub floors? This is not proper training for nurses. Such work should be done by menials engaged for the purpose. At the Scotch training homes and hospitals probationers are not expected to perform this class of work, and we consider that those interested in the health of our nurses should imitate the Scotch system. Another point worth attending to is the long hours the nurses have to be on duty at some of the hospitals. We trust that the *Nursing Record* will look into this question, and give us a symposium as to the views of experienced matrons on the proper training of nurses.

TRAMPS.

IN tracing the history of the recent small-pox epidemic it will be found that tramps have played a most important part in its diffusion. What is to be done with this class? It is a question which must come to the front in view of the mortality and the misery caused by this class. The working man out of place must seek for work and go from town to town, but he forms a very inconsiderable proportion of the mixed horde found in tramp wards. Nearly all are vagrants to whom work is distasteful, and who lead a wandering life, living by their wits, begging, stealing, lying, etc. Mr. Ribton Turner says: "Supporters of missions to the heathen may learn that it is unnecessary to send to Africa to meet with objects for their benevolent zeal. He exists in rank luxuriance at their own doors. No foreign heathens can compare with him in his utter disregard of religion, in his obscenity of language, and his utter brutality, and filthiness of life and action. He is now daily discharged from the workhouse, and from the foul dens in which he lodges, utterly friendless, utterly uncared for, and left to pursue the broad path to evil without being offered the slightest encouragement to a contrary course. Surely here is a fine field for missionary effort. To reclaim such savages would be a work of mercy to them and of kindness to society."

THE GENERAL PRACTITIONERS AND THE BRITISH MEDICAL ASSOCIATION.

AT the annual dinner of the Metropolitan Counties' Branch of the British Medical Association, Dr. Holman referred to the interesting fact that the office of President of the Council of the Association, of Treasurership of the Association, and Presidency of the Metropolitan Counties' Branch, were held by three general practitioners—viz., Dr. Bridgwater, Dr. Sewell, and himself. This is a point to be emphasized. We have persistently urged that as the British Medical Association is made up for the most part of general practitioners, that class should have some of the positions of honour. We are glad to find that under the new *régimé* this claim is recognised.

BRITISH LARYNGOLOGICAL AND RHINOLOGICAL ASSOCIATION.

AS THE result of the ballot, the following gentlemen have been elected as first officers of this new society. The selection stamps their position in the eyes of their brother specialists:—*President*: Sir Morell Mackenzie. *Vice-Presidents*: 1. England, Mr. Lennox Browne; 2. Scotland, Dr. G. Hunter Mackenzie; 3. Ireland, Mr. Philip Smyly. *Members of Council*: 1. Metropolitan, Dr. Whipham and Dr. Woakes; 2. Extra Metropolitan, Mr. Barber and Mr. McIntyre. *Secretaries*: 1. Metropolitan, Mr. George Stokes; 2. Extra Metropolitan, Dr. R. A. Hayes.

Sir Morell Mackenzie may now be regarded as the most abused man in Germany, and the reasons are not far to seek. The compliment paid to him in England will compensate him for the lavish abuse showered on him by the German press. It is evident that the Emperor Fritz, "so well beloved, so noble, so worthy of respect, so patient in suffering," yet did not hold that place in his subjects' hearts that he deserved—all this laudation notwithstanding. His son, the present Emperor, in place of respecting his father's memory, and his father's confidence in his chief medical adviser, appears to allow the ungracious attacks, which even impugn his own mother. The reports circulated about the Emperor William are confirmed by the libels, now circulated in German journals, on Sir Morell Mackenzie. The Emperor, by a word, could stop these cowardly and unjustifiable attacks. We trust it is not too late for him to interfere, and put a stop to criticisms which are discreditable, not only in professional, but filial aspects.

COUNCIL OF THE ROYAL COLLEGE OF SURGEONS.

THE election of the Council of the Royal College of Surgeons resulted in the following members being elected:

	Votes.	Plumpers.
Mr. Cadge	116	8
Mr. Bryant	106	3
Mr. Pick	93	17

A meeting of the Association of Fellows was held at the Inns of Court Hotel, at two o'clock, and the officers for the ensuing year were elected. *President*: Mr. Pollock; *Vice-Presidents*: Mr. Holmes and Mr. P. Swain; *Treasurer*: Mr. Nillelt; *Honorary Secretary*: Mr. H. Allingham.

QUACK ADVERTISEMENTS IN RELIGIOUS PAPERS.

A STRONG agitation has been started in America against the quack advertisements which appear in religious papers, and in consequence of appeals made in the interests of morality, the respectable sectarian organs have declined to insert or renew those advertisements. A certain class of advertisements disfigure our English religious papers. It is to be hoped that they will copy the example set by their American co-religionists and refuse them. Another class of advertisements are to be found in religious papers which do not offend against decency, but which are frauds. To promise a cure for incurable disease, or to offer a panacea which will cure all kinds of diseases is to obtain money under false pretences. A certain class of advertisements do this, and it must be known to the proprietors that these advertisements are dishonest, and should not have a place in papers professing to teach morality.

DR. GOODELL ON OOPHORECTOMY.

DR. WILLIAM GOODELL, Philadelphia, in the last number of *The Polyclinic*, thus expresses his views on oöphorectomy :

The question of the day is, Can a woman who has disease of the ovaries or tubes get well without operation? Why cannot a woman who has hydrosalpinx have the effusion absorbed? If she has a hæmato-salpinx why may not the blood be absorbed? or even if there is a pyosalpinx, why may not the pus be absorbed? We know that in other parts of the body pus becomes inspissated and caseous in character and undergoes absorption. I feel satisfied that too many ovaries have been removed, and that too many women have been unsexed. I say *unsexed* in the sense that, although the sexual feelings are not injured for a few months, and indeed may, for a time, be increased by restoration to health, or by the irritation caused by the ligature of the ovarian nerves, or by the congestion of inflammatory exudates, so increased, indeed, that the sexual appetite is aggressive in some cases after the operation, yet my experience leads me to say that after a time the feeling becomes blunted and may be wholly extinguished. Further, there is another objection to the operation, and that is the element of danger. A certain proportion of cases will die, and life is sweet, and very precious. Here is a woman who suffers pain in the ovaries, yet she may be able to look after her household, she may be a good wife and a good mother, and may live for years. Last year I performed nineteen oöphorectomies, and of this number one case died. This distressed me very much, for the lady might have lived indefinitely if the operation had not been done. Death in this instance was not due to septic causes, but to the suppression of the urine which occasionally follows the administration of ether. She died in uræmic coma on the fourth day. There must have been some renal trouble which was not recognized. Such cases always cause me a great deal of distress, for, as I have said, with this disease the patient might have lived many years.

On the treatment he would institute for removal, he says :

I shall advise this woman to come into the Hospital. I shall then use a succession of small blisters, with vaginal injections of hot water with such remedies as will diminish the hypertrophied tissue. An admirable combination is corrosive sublimate with ammonium chloride. From 1-48 to 1-24 or 1-12 of the bichloride may be given with ten grains of the ammonium chloride three times a day. The potassium bromide may be given with advantage in connection with these remedies. I have seen many recoveries follow this plan of treatment when associated with rest, massage and electricity, but on the other hand I have failed in a few instances. If she is able and willing to go through this course of treatment, very well. If she is not, I shall recommend the operation of removal of the ovaries,

HABIT CHOREA.

THE name, Habit Chorea, has been given by Dr. Weir Mitchell to certain local choreas, for which no definite cause can be assigned, and in which the movements closely simulate purposive acts. Dr. G. E. de Schweinitz (Philadelphia) points out that these cases can be cured by removing the cause which often underlies them, and that as eye trouble is frequently associated therewith, by suitable glasses, the needed accommodation can be supplied. The following case illustrates his practice :

W. F. C—, a young man, aged eighteen, applied for treatment January 17th, 1888. His general health was good. No history of rheumatism. Works hard in a factory. A few years ago, when about twelve years of age, had attacks of "chorea," confined to the muscles of the face, chiefly the orbicularis. This passed away under general treatment. For some months past he had acquired the habit of rapidly closing and shutting his eyes, with a quick, snapping movement. No other muscles affected. This was partially under control of the will, but was made worse under examination. The eyes were examined and found as follows :

O. D. $\frac{1}{6}$. Amplitude of accommodation 8.5 D. L. Hyperphoria 1°.

O. S. $\frac{1}{6}$. Amplitude of accommodation 8.5 D. Exophoria 2°.

Conjunctivæ injected, but not catarrhal, no phlyctænules or swollen lymph follicles. Small oval optic discs; nasal edges veiled, and coarse retinal striatum above and below, veins and central sheaths full. Distinct dread of light. Atropine was ordered, and continued for several days. Under this the refraction was found to be O. D. +0.60 s. O. S. +0.50 s. These glasses were ordered for constant wear. No constitutional treatment was given. Some months later he was reported as comfortable, so far as the eyes were concerned, and that the nervousness had departed.

LONDON SCHOOL OF MEDICINE FOR WOMEN.

THE presentation of prizes to the successful students was made on July 3rd, by Miss Louisa Stevenson, late hon. sec. of the National Association for Promoting the Medical Education of Women. There are now sixty women who have taken medical diplomas enabling them to enter their names on the British Register of Qualified Medical Practitioners. The report, read by Mrs. Garrett Anderson (the Dean), showed that there were sixty-nine students, of whom the large proportion of 33 were preparing for University examinations. She pointed out how successful some of the students had been, particularly mentioning Miss Flinney, Miss Jones, and others. Miss Stevenson, who has lately visited India, then gave an account of her impressions of the work of medical women in that country.

MEDICAL BOYCOTTING.

WE have received a statement issued by the Council of the Irish Medical Schools and Graduates' Association, on the exclusion from hospital appointments in England of candidates holding the higher qualifications of the College of Physicians and Surgeons of Ireland. We regret we cannot publish in full this very temperate and unanswerable statement, which appeals not only to reason, but to the love of fair play, which is implanted in Englishmen. To the credit of Bristol, the obnoxious clause, excluding Irish graduates with high-class degrees, was expunged. Bristol owes

something to the memory of the illustrious Irish statesman Burke, and we are pleased to think that it has been true to a principle which Burke would be the first to advocate. Liverpool is putting back the hand of the clock, but nepotism is at the bottom of it. This must be exposed, and when the glare of public opinion is brought to bear upon the case, we feel sure that the governors will be the first to put down medical boycotting and exclusive dealing.

"CONTEMPORARY MEDICAL MEN."

THE various biographies which have appeared from time to time in the *Provincial Medical Journal* have been rewritten by John Leyland, Esq., and we have the result in the shape of two handsome volumes—a veritable *édition de luxe*. The life-histories of venerable leaders of the profession, consultants, physicians and surgeons, and general practitioners, are to be found within these pages. So far as the work goes, contemporary medicine is represented. The task of editing, and collection of material, have been great; but the execution shows the impress of the skilled literateur. The printing and execution of the plates reflect credit on the printer. The correctness of the likenesses has been acknowledged. The publishers are to be congratulated on the completion of this expensive undertaking.

New Remedies.

AS THE result of a series of experiments made upon the physiological action of some of the derivatives of *Santonin*, it has been recommended by F. Coppola to use *Santoninoxime*, which is insoluble in water, but easily soluble in oils and fats, and is neither acted on by the gastric juice nor soluble in organic acids. It, however, increases the movements of the worms, and thus leads to increased peristaltic action, so that they are voided. *Santoninoxime* passes out of the system in the urine, in the form of *santonin*. It has the advantage of being less poisonous than *santonin*, while it is equally efficacious in its action on the parasite.

Sulphobenzoate of sodium, prepared by dissolving benzoic acid in a concentrated solution of sulphite of sodium, is recommended as an antiseptic dressing for wounds. It is entirely non-poisonous, and is odourless. A four or five per cent. solution in water, used as a lotion or dressing for wounds, acts as a disinfectant, and also hastens granulation.

Orthosiphon stamineus, which was introduced a short time ago as a remedy in diabetes, is recommended by Dr. Frochard in the treatment of nephritic colic. In a patient fifty-two years of age, suffering from this disease, the use of the drug was quickly followed by the expulsion of large calculi. During the succeeding two months, only one attack was experienced, and during five months after that he did not suffer at all.

M. Juranville has directed attention to the value of *Boldoin*, the glucoside obtainable from boldo leaves, as an hypnotic. In his opinion it exceeds chloral or any other similar agent in value, and is much safer, as much as 5 to 10 grains during the day being administered with perfect safety. It is remarkable that although this property of boldoin was first pointed out by Dr. Laborde four years ago, the glucoside does not seem to have been the subject of general experiment. This fact is probably due to the difficulty of obtaining it in commerce.

Cocaine has been found by Messrs. P. Langlois and C. Richet to act

more powerfully on animals in proportion as their temperature is higher. It is therefore proposed to utilise refrigeration as a means of diminishing the toxic effects not only of cocaine but of other poisons which produce convulsions. Dr. E. Hurry Fenwick has accidentally discovered a new use for cocaine. In a case in which the patient suffered from constant pain in the face, limbs, and urethra, some cocaine solution was applied to the urethra before employing an endoscope. The use of the cocaine caused the pain in the face to disappear in about sixty seconds, and in two minutes the pain in the limbs and urethra had ceased entirely. From the results of numerous experiments subsequently made on frogs, Dr. Fenwick came to the conclusion that cocaine possesses considerable reflex inhibitory power, but that it only abolishes the consciousness of weak stimuli; consequently, where pain is only reflex or sympathetic in character cocaine might be used to relieve it, but when due to actual organic mischief, cocaine would not give relief. It was thus possible by means of cocaine to determine the character of local pain—*i.e.*, whether merely reflex and produced by mischief at a distance from the part where the pain is felt, or due to organic lesions at the spot where the pain is experienced.

Pichi (Fabiana imbricata) forms the subject of an article in the *Therapeutical Gazette*, by Dr. Peyton Green. He states that he has found it very useful in cases of uric acid diathesis, renal and vesical calculi, excess of phosphates, and catarrhal conditions of the urinary tract. Its use is contra-indicated in diseases of the kidneys, in which destruction of tissue and degenerative changes have taken place, and thus it should not be given in cases of albuminuria, as it is liable to produce injurious effects.

The seed of *Plantago Psyllium* have recently been recommended by M. Langlebert for internal administration, in preference to linseed, since it yields its mucilage more readily to cold water, and affords proportionally a larger quantity, is more quickly acted on by the saliva, and is evidently partly digested by the gastric juice, judging from the experiments made on dogs. The administration of the whole seed, which is much smaller than linseed, affords a supply of mucilage throughout the whole of the alimentary canal; while the oil contained in the seed adds to its demulcent effect. A much more prolonged action is thus obtained than is possible from the administration of liquid mucilage. These seeds were at one time in considerable repute, and have undeservedly fallen into disuse. The seeds of an allied species, *Plantago Ispaghula*, are, however, still used in India for diarrhoea, and in irritable and catarrhal states of the stomach and bowels, with the most beneficial results.

Atropa Mandragora, or true mandrake, has formed the subject of an interesting series of experiments by Dr. B. W. Richardson, which are narrated in the last issue of *The Asclepiad*. He was induced, by a consideration of the narcotic and anæsthetic properties attributed to the plant by ancient writers, to make a tincture, and experiment with it. He found that a tincture made with weak alcohol was much more effective than one made with rectified spirit. He also ascertained that its action on the human subject was well marked. Applied to the tongue, the tincture produced a numbness, which lasted for several minutes. In doses insufficient to produce actual narcotism, the symptoms induced were desire for sleep, a sense of fullness in the vessels of the head, an enlarged and confused vision, an exaggeration of sounds and noises, an inaction of the bowels, with hard white fæces when the bowels were made to act, and a singular restless and nervous excitability akin to hysteria. These symptoms were not removed for two days, and they left a lingering uneasiness and coldness for a much longer period. In cases of poisoning, death occurred, in the rabbit from obstruction to respiration, caused by excessive accumulation of secretion in the bronchial passages. Under the resistance so produced, the respiratory muscles gradually ceased to act. The heart, however, remained in action seven minutes after respiration had ceased. Dr. Richardson considers wine of mandragora to be a most potent general anæsthetic. He believes that the alkaloid, if extracted, would prove to be like atropine—if not identical with it—and would without doubt be one of the most active anæsthetics yet discovered. The fact that mandragora has

a powerfully benumbing, local action seems to be its most important characteristic. Dr. Richardson states that on applying the tincture to his lips, a decided local insensibility was produced, which lasted for more than an hour. The fact that it does not depress the action of the heart also gives it an advantage over most other anæsthetics.

Batiator root—or as it is sometimes called, *Batjentjor root*—which is used in Senegal as a febrifuge, has been examined by Messrs. Heckel and Schlagdenhauffen. They have determined that its botanical source is *Veronia nigritiana*, S. and H. The root is formed of numerous long slender fibres, about twenty to thirty centimetres long, a number of them being united to form a knotty rhizome, unequally spherical at the crown or neck, where it is covered with silky hairs. The authors have succeeded in obtaining the active principle in the form of a hygroscopic whitish powder, yielding a pale yellow solution. It is a glucoside, for which the formula $C_{10}H_{24}O_7$ is given. By the absorption of two molecules of water it splits up into a resin and glucose. To this glucoside the name of vernonin is given. It is only very slightly soluble in ether and chloroform, and the solution, when evaporated, gives a colourless residue of a resinous appearance, which is turned brown by concentrated sulphuric acid, the colour passing to a violet purple, which remains for some hours.

The physiological action of vernonin has been tried upon frogs, and it appears to be that of a cardiac poison, comparable to digitalin, but eighty times less active. A dose of ninety centigrammes, hypodermically injected, killed a frog in three hours.

Periscope.

I.—GLEANINGS IN MEDICINE.

BY W. B. KESTIVEN, M.D.

On Fumigation, Inhalation, etc., in Pulmonary Affections of Children (*Journal de Médecine de Paris*, June 3rd, 1888).—By Dr. H. Pierron. The agents employed for this purpose are those which under ordinary conditions give out odorous particles. A special study thus arises—to discover those odorous particles which are useful in infantile diseases of the respiratory organs. It is of course a great point to administer medicine to children in such form as shall obviate their natural repugnance to drugs. This problem is solved by charging the atmosphere with the odorous principles. Thus the taste of eucalyptus which is not tolerated by children when given by the mouth is readily taken into the system through the lungs, and exerts a powerful action in promoting expectoration. M. Perrion places the following ingredients over the flame of a spirit lamp—viz., leaves of the eucalyptus, 50 gr.; pine buds, 50 gr.; rectified essence of turpentine, 40 gr.; water, 1,000 gr. Water is added from time to time to supply loss by evaporation from the continued application of heat. The atmosphere is rendered agreeably aromatic, and may be kept in the same state for several days. In like manner, tar and juniper berries may be employed with advantage, as may also balsams and oleo-resins. The vapours of various aromatic plants may be therapeutically employed by decoctions of these being placed near the bed, or poured upon serviettes. Dr. Perrion also employs dry fumigation, by burning various substances, such as sulphur, salts of potash, benzoin, myrrh, etc., upon plates of iron. The use of pastilles containing medicinal ingredients are also advocated by Dr. Perrion. The atmosphere of a room may also be charged with the vapours of medicinal agents by means of the spray apparatus.

Vernonin, a new Cardiac Poison (*L'Union Médicale*, May 26th, 1888).—MM. E. Haeckel and F. Schlaedenhauffen have brought under notice a vegetable substance, called on the west coast of Africa *Batalion* or *Batjentjort*, which is sold as a febrifuge. It has been identified as the *Vernonia nigritiana*. According to some authorities it is an emetic, comparable to ipecacuanha, but no emetine has been detected in it. Its alkaloid forms a white power, slightly hygroscopic. Injected beneath the integuments of the lower extremity of a frog, it induced paralysis of the limb. A large dose causes cessation of the heart's action in the same manner as digitaline, convallaria, strophanthus, and other vegetable poisons. Injections of smaller doses depress the heart's beats, and prove fatal in about forty-five minutes. Vernonin has greatly less poisonous powers than digitalin. [Of the therapeutic properties of this alkaloid no special mention is made.]

Puncture of the Heart in Syncope under Chloroform (*L'Union Médicale*, 26th May, 1888, from *Centralblatt für Chirurgie*, 1887).—In order to determine the effects of this operation M. Watson has performed experiments upon animals. Chloroform was given in continuous doses. When syncope was produced M. Watson waited from one to four minutes, when he passed a needle through the thoracic parietes into the cardiac region. The needle reached the right ventricle thirty-eight times, the left ventricle six times, the vena cava superior three times, twice the inferior cava, and twice the apex of the heart. Of thirty-eight animals in which the instrument had entered the right ventricle, nine were restored to life. The operation was not dangerous; hæmorrhage occurred only when the venæ cavæ were punctured.

Treatment of Typhoid Fever by Cold Baths (*L'Union Médicale*, May 19th and 24th, 1888).—Dr. Liebermeister, of Tübingen, lays down the following propositions:—(1) In the majority of fevers the increase of temperature constitutes the danger of the patient; (2) it is the duty of the medical attendant to combat the elevation of temperature by suitable means; (3) the basis of antipyretic treatment consists in the direct abstraction of caloric by cold baths; (4) there are cases in which antipyretics may be useful. At the Medical Society of Lyons the treatment of typhoid by antipyrine, and by cold baths, was discussed *pro* and *con*. A fatal case under the use of antipyrine was related by MM. Weill and Chabannes; this case was explained by M. Clement. M. Brand showed the higher rate of cures under the cold bath treatment, and dwelt upon the injurious effects upon the nervous system, of the large doses of antipyrine that are required. The beneficial influence of cold bath upon the secretion of urine was adduced by Mr. Brand, in contrast with the ill-effects of antipyrine in arresting the oxidising action of the kidneys. M. Brand admitted the power of antipyrine in reducing the temperature, but observed that it rapidly remounted, whereas the reduction of temperature by cold baths continues, while the function of the skin are restored. The following conclusions were submitted by M. Glénare:—(1) The treatment of typhoid by cold baths, which has been adopted within the last fifteen years, in Lyons, is still in full favour, and has maintained its promises; (2) the method of treatment by cold baths has afforded the means of judging the value of other methods; (3) the law is verified that the ratio of the mortality in fever is in direct ratio with the administration of antithermic remedies, and in increasing ratio with the number of cold baths administered.

On Dilatation of the Small Vessels of the Tongue, and their semeological value. By Dr. Gillot, d'Autun (*L'Union Médicale*, May 26th, 1888).—Dr. Gillot points out a feature of practical interest in the condition of the sub-lingual vessels. These, in early life, are but slightly developed, the larger veins only being apparent beneath the mucous membrane; but with advancing years, and in certain pathological states, these vessels become dilated, multiplied, and varicose, the capillaries also more visible. In the course of these small vessels, lateral dilatations are seen, of the form of prominent granulations, or minute ampullæ. These may be met with on the whole of the under surface of the tongue, but their predilection seems to be for the extremity of the tongue, and on each side of the median line, or towards the root. Their number is variable, sometimes few, sometimes in large groups. They seldom exceed a millet-seed in size; their colour depends upon the state of the circulation. These dilatations are minute aneurysms, produced by dilatation of the thinned walls of the vessels, analogous to those which are often seen in the cerebral plexuses, and having a relation to the milary aneurysms of the brain. An examination of the sublingual vessels may therefore furnish an indication of the condition of the vessels in the nervous centres. They appear to Dr. Gillot to be in some measure associated with the arthritic diathesis. Dr. Gillot does not pretend to have enunciated an absolute theory, but merely to have directed attention to indications of changes in the brain threatening hæmorrhage or congestion of that organ.

On the Occlusion of the Stomach at the Cardia. By Dr. V. Gubaroff (*Centralblatt für Chirurgie*, June 2nd, 1888).—A case of gastrotomy has offered Dr. Gubaroff the opportunity of investigating the lower section of the œsophagus, and the action of the muscular fibres of the œsophageal opening through the diaphragm. It was observed that in consequence of the oblique entrance of the œsophagus into the stomach a valvular arrangement is produced. In children, in whom the direction of the gullet to the stomach is straighter, there is a corresponding diminution of the valve, whereby the easier evacuation of the contents of the stomach is provided for. The author finds this difference in the direction of the tube still more marked in dry preparations.

Creolin (*Centralblatt für Chirurgie*, May 26th, 1888).—Dr. Heinrich Ransche calls attention to the disinfecting and deodorising properties

of a new antiseptic—creolin—a dark brown liquid obtained in the destructive distillation of coal; having slightly the odour of tar. It possesses, according to Dr. Ransche, antiseptic properties in a very high degree. It does not mix very readily with water; will dissolve readily in alcohol and in glycerine. A mixture of from half to one per cent. with cold water forms a solution that is sufficient for ordinary purposes of disinfecting the hands, instruments, bandages, etc., in operations.

II.—NOTES FROM FRENCH JOURNALS.

BY H. R. HATHERLY, M.R.C.S.

Iodoform in Tubercular Hæmoptysis (*Le Progrès Medical*).—Drs. Chauvin and Josissenne report that a rapid and constant success has followed the administration of iodoform from three to five times a day, in doses of three-fourths of a grain. It was at first administered in combination with ergotine, quinine, and tannin, subsequently with tannin only. The most recent cases have been treated with iodoform only, the results being equally good. The pills may be made with extract of gentian, cinchona, or liquorice.

Six Children at a Birth (*Le Progrès Medical*).—It is reported that a woman at Castagnola has been recently delivered of six children at a birth, four boys and two girls, all of whom lived a brief period. The mother, æt. thirty-eight, had previously had multiple births. The case has been visited by several medical men from Milan and Como, who fully confirm the accuracy of the report.

Dissolution of the Medical Societies of Alsace (*Le Progrès Medical*).—The following extract is from "The Annals of the Medico-Chirurgical Society of Liege":—"We do not know what has been the motive of this decision of the German authorities. We can only express our deep regret at the loss of so distinguished a society in the scientific world, as the Medical Society of Strasbourg. Several of our friends had the honour of being corresponding members, and they will be grievously surprised to find that scientific relations, which should be beyond the reach of party discussion, have been rudely severed. The *Landerzeitung* asserts that the measure has been adopted because the Society of Prevention and Mutual Help has had its headquarters transferred from Mulhouse to Belfort."

Illegitimacy in Paris.—The official return of births in Paris during four consecutive weeks, ending June 2nd, 1888, are as follows:—

					TOTAL.
Male (legitimate)	..	418	409	409	424 — 1660
Male (illegitimate)	..	149	152	152	176 — 629
Female (legitimate)	..	403	356	356	384 — 1499
Female (illegitimate)	..	171	122	122	154 — 569

It will be seen that in each week and in each sex the proportion of illegitimate children exceeds one in three. The exact proportion of the gross total being 1 to 2.68.

Spontaneous Cure of Senile Cataract.—M. Nicati has recorded a case of spontaneous cure of senile cataract. The clearing of the opaque crystalline lens coincided with its liquefaction. Agents are known in histology capable of dissolving the elements of the crystal, and possibly these substances may become therapeutically useful.

New Method of Treating Stricture of the Urethra.—Dr. T. A. Fort prefers electrolysis to urethrotomy and dilatation. He considers urethrotomy is in some cases a dangerous operation, and that it is generally followed by relapse. Electrolysis, as hitherto applied to the treatment of stricture, has proved unsatisfactory, solely because defective instruments have been employed. The instrument he employs consists of one piece. It is a long gutta-percha bougie, perforated in the centre by a metallic wire, and bearing about the middle a plate of platina, which makes a linear division in the tissue of the stricture. The operation usually takes from three to five minutes to perform. Dr. Fort uses a single battery of moderate strength, such as Gaiffe's, for continuous current. The positive pole is applied to the thigh, whilst the negative pole is connected with the "Urethro-Electrolysator" after introduction into the urethra. He employs from twenty to thirty milliamperes, varying the strength according to the density of the tissue, the condition of the patient, and also with the intensity of the battery. The operation of linear electrolysis produces molecular destruction of the tissue of the structure, which is in contact with the platina plate. After the operation there is a muco purulent discharge for several days. The operation is rapid, produces no hæmorrhage, and four hundred operations have been performed. In no instance has any serious complication arisen.

Extra-Uterine Fœtation (*Journal de Médecine*).—Successful operation. Dr. E. Kirmisson has operated on a patient, æt. thirty-five, who had an extra-uterine fœtation of three years' standing. He

describes the operation as follows:—The operation was performed on the 17th day of August, 1887. Antiseptic precautions were adopted as in all laparotomies. An incision made in the median line between the umbilicus and the pubis brought us rapidly to the interior of the cyst, from which some purulent fluid and some very offensive gas escaped. We were then able to feel the fœtus, whose head was lodged in the left iliac fossa. In endeavouring to take hold of it we brought away some ribs, which separated with great ease from the soft parts, like bones will separate from the soft parts in anatomical preparations. We were then able to seize an arm and reach the cervical region. We separated the head from the trunk with scissors, and afterwards extracted the trunk entire by moderate traction. As for the head, it was impossible to bring it away whole. So great was the putrefaction that the different bones composing it had to be brought away one at a time with forceps. The original incision was somewhat narrow, and ought to have been enlarged upwards; nevertheless, it was possible to remove the entire fœtus without trespassing on the limits of the cyst, that is to say, without opening the great peritoneal cavity. After making sure that every portion of bone had been removed, the cavity was freely washed out with boracic solution until the fluid returned absolutely limpid. Afterwards, we introduced into the cavity two large drains lying parallel with each other, and the wound was dressed with iodoform gauze. The entire operation lasted three quarters of an hour.

A New Antiseptic (*Journal de Médecine*).—M. Lubbert introduces a new antiseptic which is called oxynaphoic acid. It is derived from naphthol, and possesses antiseptic properties in a marked degree. It is crystallisable in fine colourless needles, is soluble in alcohol and ether in the proportion of ten per cent. by weight, and is even soluble in water. It is very volatile, and gives off vapours which provoke sneezing and mucous irritation. Compared with oxolicyclic acid in equal doses, it prevents the putrefaction of blood (which the latter does not). It acts in the same way when mixed with urine, broth, and extract of meat. Unfortunately, it is too poisonous to be used in the preparation of articles of food, and at present, can only be considered admissible for the cleansing of wounds, instead of iodoform or corrosive sublimate, and for the disinfection of objects: spittoons, urinals, etc. It possesses this advantage over corrosive sublimate, that it does not coagulate albumen.

Eucalyptus in Diphtheria (*Journal de Médecine*).—Dr. E. Ory recommends the rubbing of the false membrane in diphtheria with a preparation of eucalyptus. The formula he gives is:—

Infusion of Eucalyptus.....	100 grammes.
Glycerine.....	10 grammes.
Salicylic acid.....	0.30 grammes.
Cherry Laurel water.....	1 gramme.

He uses a large probang of charpie with a stiff, straight handle, and touches the pharynx rather roughly with it every hour during the day, and every two or three hours during the night, and continues this treatment until every vestige of deposit has disappeared. He has found in almost all cases, a cure has followed the treatment within five days.

[NOTE.—Dr. Murray Gibbs and Mr. Carroll, of New Zealand, have treated 123 consecutive cases of diphtheria without a death by keeping the patients constantly in an atmosphere of blue gum steam. No other treatment is adopted. The blue gum is alleged to have far superior antiseptic properties to the red gum from which the oil of eucalyptus is derived.]

Breach of Professional Confidence (*Le Progrès Medical*).—The court at Besancon has condemned a physician, superintendent of a lunatic asylum at Dôle, to a penalty of 500 francs and 2000 francs damages, for revealing a professional secret. A pamphlet had been published entitled "An Observation on Reasoning Mania," in which the identity of the patient was revealed; the initials of the husband's name, and his business occupations in various towns, appear to have been mentioned in the pamphlet.

Ocular Symptoms in Tabes Dorsalis (*Gazette Hebdomadaire des Sciences Médicales*).—M. Berger, of Gratz, described the ocular troubles which attend tabes dorsalis in the pre-ataxic period, or, in what is more correctly speaking, the ataxic period. The symptoms observed by M. Berger, and which he believes to be hitherto unnoticed are: 1. A diminution of intra-ocular tension, varying greatly in degree, considerable hypotism, most often manifested during the paralytic stage, and more noticeably during the pre-ataxic stage. 2. Paralysis of the muscular fibres of the eyelids, increasing progressively from the pre-ataxic to the paralytic stage, and afterwards a slight contraction of the space between the eyelids, co-existing in a certain proportion of cases with myosis. 3. A deformity of the pupil, which frequently ceases to be circular, and becomes elliptic, the long diameter being directed from without inwards, and from below upwards, symmetrically

on both sides. 4. The co-existence of myosis, diminished intra-ocular tension, and contraction of palpebral opening, reminds us of analogous symptoms, which occur after section of the great sympathetic. These symptoms show that this nerve plays an important part in the production of ocular symptoms in *tabes dorsalis*. Nevertheless, the fact that any of these symptoms may occur separately, proves that the great sympathetic nerve is not the cause, but only the means of transmitting irritation from the spinal marrow to the eye.

Laparotomy in Italy (*L' Electrotherapie*).—At the fifth meeting of the Italian Surgical Society, held at Naples last March, M. Ruggi related the results of laparotomy during three periods, corresponding with the methods of treatment adopted.

First Period (without antiseptics) Mortality 75 per cent.

Second Period (with phenic acid) " 33 "

Third Period (with corrosive sublimate) " 4 "

The Relation of the Nervous System to Hydrophobia (*L' Electrotherapie*).—M. Brown Ségur, at the meeting of the Society of Biology on April 21st, related the results of experiments made on animals with the object of establishing the relation of the nervous system to the development of hydrophobia. Convinced that the nerves were the means of transmission, he had hoped that the section of the nerve immediately after inoculation might stave off the development of disease. His experiments have satisfied him that his conviction was ill-founded, although it would not be right to assume that the nervous system plays no part in the propagation of hydrophobia.

Double Ovariectomy in a Woman æt. Seventy-seven (*Le Progrès Medical*).—Dr. Felix Terrier has operated on a patient at the Bichat hospital, æt. seventy-seven, for ovarian disease, with gratifying success. The patient, on her admission, was almost helpless, owing to her advanced age and the great size of the tumour. She could not walk, and could, with difficulty, sit up in bed for a few seconds. She had lost much flesh since the commencement of her illness; she was troubled with cough, especially at night; urine was free from sugar and albumen. The operation was performed with full antiseptic precautions. The tumour on the right side was about the size of an adult head, of regular form, and smooth surface, generally solid, although at some points fluctuation was detected. There were numerous omental and intestinal adhesions. The tumour on the left side was about the size of a hen's egg, and was absolutely fibrous and very hard. There was a great quantity of ascitic fluid. Patient made an excellent recovery, although the wound did not heal rapidly.

III.—SELECTIONS FROM GERMAN JOURNALS.

BY H. HANDFORD, M.D.

Wölfler. On Transplantation of Mucous Membrane.—Wherever mucous membrane is extensively destroyed, cicatricial contraction is apt to result, and produce serious disturbances of function. To obviate this Wölfler has succeeded in transplanting strips of mucous membrane, three to four centimetres long, and one to two centimetres broad, obtained from cases of prolapsus-uteri and prolapsus-ani, etc. The results have been as satisfactory as in the case of epidermis. The strips adhere firmly, especially in young individuals and in recent wounds. Afterwards mucous membrane obtained from the lower animals was tried, and with equal success—viz., from the stomach of the frog, the œsophagus of pigeons, rabbits, and the urinary bladder of the rabbit. Wölfler has practised transplantation of mucous membrane in seven cases. 1. In the case of impermeable stricture of the urethra. External urethrotomy was performed, the indurated cicatricial tissue, together with the affected portion of the urethra, was excised, and on the fourth or fifth day transplanted mucous membrane was placed in the wound, and a catheter introduced from the meatus to the bladder, and round this the new urethra was formed. 2. In two cases of blepharo-plastic operation when the restoration of the conjunctiva was successfully accomplished. 3. In one case of rhino-plastic operation, and in one of plastic operation on a limb.

Alberti (Potsdam). On the Successful Treatment of an Occipital Meningocele by Extirpation.—Hitherto very few examples of the successful treatment of meningocele have been recorded, and the reason for this is not far to seek. Many cases die during or shortly after birth; others are associated with hydrocephalus, or other serious brain lesion. The cases which offer some chance of successful treatment by operation are the minority, consisting of a protrusion of the membranes alone, filled with fluid, and unaccompanied by any brain lesion. Such cases have been treated by compression, puncture, injection of iodine, and ligature. Of these, only two cases of ligature have been successful, one by Thompson, and the other by Annandale. A few cases have been treated by extirpation, but hitherto only with

one successful result—viz., that by Richard in 1857. The author's case was that of a child, eight weeks old, born of healthy parents, and presenting no abnormality except a swelling, thirty centimetres in circumference, in the occipital region. The skin over the swelling was normal in appearance, and thickly covered with hair. The swelling fluctuated, but did not pulsate. Pressure upon it caused the child to cease crying, to become somnolent, and to breathe irregularly. The operation was commenced by puncturing the tumour, and withdrawing 230 grammes of clear amber-coloured fluid; the tumour was then about half emptied, and its walls became sufficiently lax to enable the pedicle to be readily reached. A clamp was applied to the pedicle to prevent the excessive draining away of cerebro-spinal fluid. The skin was divided, and afterwards the membranes. The latter were tied with a silk ligature. The opening in the occipital bone was found to be about 1.5 centimetre long. The skin margins were afterwards brought together with several points of suture, and the wound closed without any drainage, and dressed with sublimate wool. Immediately after the removal of the tumour the child became dusky, and showed a tendency to asphyxia. It recovered on the application of hot cloths. Soon after the operation, twitching of the extremities came on, and lasted about ten minutes. During the night the child slept. From this time on it made an uninterrupted good recovery. The wound healed by first intention, with the exception of the point where the silk ligature emerged. The latter came away at the end of six weeks, and when the case was reported the small fistula was soundly healed. The sac was empty, and consisted only of membranes covered by the normal skin.

Bernays. On Three Cases of Ligature of the Vertebral Arteries for Epilepsy.—This procedure was carried out in three young epileptics. In the first case the artery could only be found on one side. In the second and third both vessels were tied, and the patients remained free from fits for four or five months respectively. The author considers the operation both dangerous and difficult, and does not advise its repetition. In one case the operation took two hours.

Bergmann. A Case of Total Extirpation of the Larynx Three Years Ago still Remaining Free from Relapse.—The patient was a man, forty-nine years old, whose larynx had been totally removed (epiglottis, thyroid, and cricoid) in February, 1885. The diagnosis was made after the microscopic examination of a fragment removed by the galvano-caustic snare. The tumour grew from the right half of the larynx, and left only a small chink free for respiration. Tracheotomy was performed a fortnight before the operation. For the first few days the patient was fed by a tube passed through the wound, and afterwards through the mouth. By March 1st, that is, in twelve days, the patient could swallow solid food. A fortnight later Foulis' artificial larynx was introduced, and the patient expressed himself as very comfortable with it, and he has worn it ever since. He does not, however, make use of the apparatus for phonation.

Fischer. Extensive Resection of the Stomach and Intestine. In October, 1887, a peasant woman, aged thirty-seven, applied at the Breslau Clinic with an ulcerating carcinomatous tumour in the region of the umbilicus that had existed for five months, and on palpitation was found to pass deeply into the abdomen. On attempting to remove the tumour it was found to involve the anterior wall of the stomach, from which a fistulous opening formed a communication with the transverse colon. The whole of the diseased portions of the stomach and colon were freely removed. The two ends of the intestine were fixed in the abdominal wound, and the edges of the stomach were brought together with Lembert's suture. The patient lived for six months, and died eventually of cancer of the liver. There was no return of the disease in the stomach.

Steinthal. On the Surgical Treatment of Perforation of the Stomach and of the Intestine.—Of eighteen cases in which the abdomen has been opened for the treatment of peritonitis, consequent upon perforation of the stomach or intestine, eight have been cured. The great difficulty appears to be to find the perforation, which is often small, and generally more or less obscured by the effusion of lymph. The most successful results have been in perforation of the vermiform appendix. The author relates three cases recently operated on by himself in the Heidelberg Clinic, all of which terminated fatally. The first was a servant maid, twenty years of age. Perforation of a gastric ulcer was diagnosed. At the operation slight peritonitis was found, and great vascular injection on the anterior surface and smaller curvature of the stomach, where also there was some fresh false membrane. The perforation could not be found. The patient died on the fourth day, and at the autopsy a perforating ulcer was found on the anterior wall of the stomach. The second case was a waiter, aged thirty-three, who had suffered for a long time with stomach symptoms, and three

days before his admission was seized with sudden pain in the abdomen. Perforation of the stomach or of the cæcum was diagnosed. The abdomen was opened in the middle line, and a collection of pus was found around the cæcum, but no perforation. The patient died in the course of the night, and at the autopsy a perforation of a chronic ulcer of the stomach was found masked by surrounding circumscribed peritonitis. The third case was a man of fifty-two, in whom a diagnosis of acute typhlitis, with circumscribed peritonitis due to perforation, was made. Laparotomy was performed in the ileo-cæcal region, and a gangrenous vermiform appendix resected. The patient improved at first, but died on the sixth day.

Breda. On Erythema Nodosum Affecting the Skin, Mouth, Larynx, Trachea, and Testicle (*Rivista Veneta di Scienze Mediche*, Padova, September, 1887).—The author relates a case of erythema nodosum in which the occurrence of the eruption was verified in the above unusual situations. The patient was a peasant, aged thirty-seven. There was nothing noteworthy in his family history except that his parents had suffered from pellagra, and he himself had shown a tendency to the same affection. The eruption of erythema nodosum had commenced on the concha of the left ear, and soon spread to the nostril. The left testicle became affected, swelled to a very considerable size, and a large quantity of fluid was removed from the tunica vaginalis by tapping. The eruption meanwhile spread over the greater part of the body. The eruption was accompanied by fever, the temperature reaching 104° F. at night, but generally falling to the normal in the morning. There was a trace of albumen and of sugar, and a few renal epithelial cells in the urine. There followed general oedema, punctiform hæmorrhages, cough, aphonia, and finally death from suffocation.

Masucci. On the Different Methods of Treatment of Laryngeal Tuberculosis (*Giornale Internazionale delle Scienze Mediche*, Fascicolo 11).—The author agrees with Störk and Schnitzler in admitting the possibility of the cure of tubercle of the larynx. No one at the present day can continue to deny such a possibility in the face of the observations of many eminent laryngologists. When it was recognised about fifteen years ago that pulmonary tuberculosis might undergo spontaneous cure, more attention was devoted to the treatment of laryngeal tubercle, and pencilling with solution of nitrate of silver became the custom. Störk recognised that this did nothing but harm. Afterwards the specialists limited themselves to applying solution of morphia. Schnitzler recommended acetate of lead in powder by insufflation. Tincture of iodine, with or without glycerine; perchloride of iron, with glycerine; sulphate of iron, chlorate of potash, coca, and other remedies have all been tried, without much success. At the present time vaporised solutions of carbolic acid, resorcin, salicylic acid, or corrosive sublimate, are being tried. Iodoform, as an ethereal tincture, has been proposed by Elsberg, of New York, and is probably one of the most successful remedies. The author, however, prefers a solution of corrosive sublimate, and treats all his cases at the Naples Clinic with that, alternating sometimes with iodoform. Voltolini recommends the use of the galvano-cautery, and this plan has been largely followed, both in France and Germany. When the infiltration is considerable, and the ulceration and the difficulty of swallowing do not yield to the application of cocaine, Hering is accustomed to scrape the parts with a sharp spoon. If the tubercular infiltration is quite recent, and causes dysphagia, Hering injects a 20 to 30 per cent. solution of lactic acid into the sub-mucous tissue. The author concludes by saying that the methods of scraping with a sharp spoon, and of injecting lactic acid under the mucous membrane, are the most efficient modes of treatment we at present possess.

IV.—SELECTIONS FROM SPANISH AND OTHER MEDICAL JOURNALS.

By G. F. CADOGAN-MASTERMAN, M.D.

Sobre el Exantema Bromico. Dr. Carlos Schadek (*Revista de Ciencias Médicas*, Barcelona).—Amongst what may be termed *Exanthema medicamentosa*, that is eruptions due to the action of certain medicinal agents, and which generally disappear as soon as the remedy is discontinued, the forms due to the bromides is especially interesting from their diversity in character, which is sufficiently perplexing, and also because they are liable to be mistaken for secondary or tertiary syphilitic eruptions, and so lead to very serious errors in diagnosis and treatment. And although they have been long known, very little notice has been taken of them in systematic works on dermatology. Even in the voluminous treatise of Ziemessen the subject is dismissed in a few lines, and it was only after long search in very many periodicals and essays that the author was able to collect the information he gives in his paper.

Bromine was discovered by the French chemist Balard in 1826, but it was not used in medicine until 1857, when Lecocq prescribed it in epilepsy, and in 1868 occurs the first notice of its unpleasant effects upon the skin. Shortly afterwards, Fabret and Legrand de Saullé referred to some cases they had seen, and in papers published simultaneously by Martin, Demourette, and Pelvet on the physiological action of the bromides, these eruptions, and especially one resembling acne, were described. Then Cholmeley wrote of a case of his which presented a plentiful crop of very painful pustules, similar to those of varicella, on the face and feet, and Mitchel of deep ulcers with thick rupia-like crusts. But the most complete *resumé* is that of Voisin, who has described five varieties of the eruption he had met with, of which the most frequent, he says, is a pustular form, resembling acne simplex, covering the face, chest, and upper extremities. Less frequently round or oval papules, or wheals, of from two to five cms. in diameter, rose-coloured and very painful, are met with, which give rise to yellowish warts (verruge) about the size of millet seeds, which persist for a long time and leave yellow scaly stains upon the skin. Others, again, are furunculoid; and the fourth appears in hard, red papules, and fifthly a moist form resembling, if not identical with, eczema. Neumann describes three cases—the first of a child of eighteen months, who, after taking bromide of potassium for some time, had the face and extremities covered with pustules, and a large purulent blister on the foot; and others, adults, where patches of congestion appeared on the hairy parts of the face and neck, terminating in deep ulcers. It is unnecessary to give more of the names quoted by the author (*without a single reference*), and the effects noticed are one or the other of those above mentioned—pustules resembling varicella, blisters filled with degenerated pus, and ulcers. They usually appeared after the prolonged use of the medicine, but in one, in a woman æt. twenty-five years, after only three drachms had been taken. A lad, twelve years old, suffering from epilepsy, took bromide of potassium continuously for two years, when pustules began to appear all over the body, which, discharging, left unhealthy bleeding ulcers. The unfortunate lad became at the same time miserably thin and weak, and lost all appetite, and with the greater misfortune of having his malady mistaken for syphilis, for which he was vigorously treated for a fortnight. At the end of that time pustules showed themselves on the conjunctiva, and the patient's condition seemed so desperate that the happy suggestion was made to stop the medicines altogether, when he speedily recovered health and strength again. In another case, that of a man who had taken in rather less than a year five pounds of the bromide, death ensued. But a patient of Jacquet's suffered severely from pustules and small hard tubercles after taking only fifteen grains for eleven days consecutively. As, however, the condition persisted after the medicine was discontinued, it is probably an instance of *post sed non propter hoc*, for in nearly every other case the eruption promptly disappeared after the disuse of the medicine.

From the analogous effects sometimes seen after the use of iodides there is the remarkable difference that if they be not well borne the eruption appears within a few days, but in the case of the bromides usually many weeks or months elapse before intolerance is shown. Where, however, very large doses have been given, the skin has been affected almost as quickly, so the difference would seem to be due to the great disparity in their physiological activity.

In general the bromine eruption first appears on the face, more frequently on the scalp, in scattered papules, or pustules, and slowly extends to the chest and arms. It is only when the medicine has been taken for some time, and in full doses, that the pemphigoid blisters are seen on the feet and hands. The pustules may be succeeded by solid tubercles, somewhat raised above the surface, with a swollen and reddened border, which occasionally form the large blisters filled with sebaceous pus before referred to. Or the pustules may be converted into warty areas covered with yellow, fetid crusts, impetiginous in appearance, and coarse; but with the difference that they speedily disappear without any treatment when the bromide is discontinued, leaving, however, persistent yellowish stains, whenever ordinary impetigo tends to get rapidly worse if not appropriately treated.

In the worst cases the eruption becomes confluent, and may cover large skin areas, leaving irritable ulcers and much scarring; but even in these the rule still holds good, *sublata causa tollitur effectus*. When it is not known that bromides are being taken, or their effects are unfamiliar to the physician, the diagnosis is beset with difficulties, and the grave error, as we have seen, may be committed of mistaking the exanthem for a syphilitic rash, the brownish-yellow tint of the skin around the pustules and of the resulting scars being especially misleading. There is one point of difference: the acneform eruption generally appears first in adults, on the scalp, the back of the neck, and the hairy parts of the face, whilst acne simplex shews itself on the forehead and cheeks near the nose. The fundamental difference, however, between the bromine and syphilitic rashes is, that the former

is due to inflammatory infiltration of the skin tending to form pustules or ampullæ, ending in ulcers; whilst the latter is non-inflammatory, with depositions of solid material, and any pustule dries up with a scaly, more or less persistent crust.

Progress of Medicine in Spain (*Idem*).—In a report of the Congress of German Anatomists recently held in Würzburg an anecdote is related of Kölliker which affords curious evidence of the extraordinary strides medical science has made in Spain within the last forty years. The veteran professor was telling Dr. Palacios that in 1849 he made a tour in Spain, and visited Madrid, and that the then professor of physiology in the university begged him to show him some blood globules, *for he had never seen one*. He possessed a microscope, but neither he nor any other member of the faculty had any idea how to use it. And now, in a remote Biscayan hospital, Enrique Ercilza has rivalled Victor Horsley in his operative treatment of epilepsy.

The Removal of the Spinal Cord. Dr. Axtell (*The New York Medical Journal*).—"Every pathologist who has attempted to remove the spinal cord has, no doubt, sighed at the magnitude of his work loomed up before him. No matter how skilled one may be in the use of *post-mortem* instruments, the present method of removing the cord has ever been most tedious and laborious, and, until an easier method is found, our pathology of spinal cord affections will be retarded; only those who are most patient and have more time than the average pathologist has to spare, being able to derive fresh knowledge from study in this wide-reaching field." The author then graphically describes in detail the troublesome plan usually employed of cutting through the vertebral arches, but he does not seem to be acquainted with the almost equally laborious, but greatly more expeditious Vienna one, of removing the bodies of the vertebra anteriorly. "And in what direction can a remedy come? At every autopsy, after removal of the brain, one sees a small, delicate, white mass of spinal cord peeping from its long narrow bed, and is almost involuntarily tempted to grasp it, and seek to draw it forth. Yet, how futile such an attempt would be! But does not this suggest a possible remedy? The spinal cord is about sixteen inches long, and lies in a bony canal, thrice-curved, and of varying shape and diameter. *But it does not nearly fill it*, its investing membranes being separated from the walls by areolar tissue and a plexus of veins. Now is not the way clear? Is it not possible to divide the cord from its attachments without injuring it? Can not a thin, segmented, vertebrated cylinder, with sharp, biting teeth on its first section, be pushed spirally downwards around the cord, just as a Sayre's vertebrated probe conforms to the curves of a sinus, and cut through the nerves and processes of the *dura mater* as it is rotated onwards to the *filum terminale*, where some simple mechanism could be used for cutting the cord transversely, or it might be divided by a knife introduced there between the vertebrae." The suggestion in this form is, I fear, impracticable; there are so many mechanical difficulties in the way of constructing a tube in numerous jointed sections, slender enough, and yet strong enough for the purpose, and it would be unnecessarily complicated. I have been thinking, however, that the conditions might be met by the use of a single section of a cylinder, made of the very thinnest steel, and but half an inch in length attached to a slender, flattened rod of the same metal, or, better still, to two such rods which could be kept apart by sliding through slots in a ring, which would lie loosely on the *foramen magnum*. The little cylinder would be divided vertically by a wide slit, so that unless compressed it would be (say) half an inch in diameter, but if lightly pinched could be reduced to 0.3 inch without the edges overlapping. Therefore, as it was slipped down the spinal canal, its elasticity would keep it closely applied to the wall and away from the cord. The lower edge should be finely serrated, and the angles rounded above and below. To use it, the *dura mater* of the cord would be detached from the margin of the *foramen magnum*, and two or three fine silk ligatures passed through it; they would be about a yard long, and held twisted together with slight tension by an assistant in the axis of the cord. Then the cutting cylinder would be gently compressed between the finger and the thumb, slipped into the canal, and with slow rotation passed onwards, the ring with its two radial slots would now be passed over the ends of the rods with the ligature between them down to the base of the skull, and a similar but larger ring clamped to their extremities to give a ready means of rotation, of which the gently stretched ligature would preserve the direction. When all lateral structures had been cut through as far as the first lumbar vertebra, the instrument would be withdrawn, and one of the vertebral arches removed in order to divide the cord as low down as possible, which, then being free, could be withdrawn with mangled nerves, but entire as far as all within its sheath is concerned. The subject would be, of course, in the supine position with the spine straightened as much as possible.

Antipyrin as a Sedative during Parturition. F. Seilski (*Wiadom*).—In the Lying-in Hospital of Lemberg the author has ad-

ministered this remedy, in doses of one gramme, in four cases—three labours and one abortion—for the purpose of alleviating pain, and with complete success. The uterine contractions were not interfered with, and the woman only felt pain, and that much less than usual, at the moment when the head was passing through the vulva.

Glonoin in Collapse (*Medical Standard*, Chicago).—Dr. Lackensteen gives particulars of four cases in which he administered, by subcutaneous injection, a one per cent. solution of nitro-glycerin in extreme collapse, with success. A lady suffering from the agony of passing a gall stone, fainted and appeared to be dead, the injection of ether and other remedies was tried without effect; at the end of half an hour there was still complete insensibility, with a cadaveric hue of the features, and respiratory nor heart sounds to be detected. Ten drops were injected, and in a few minutes the heart shewed signs of recovery, and after a tenth (?) of a grain of atropin had been also injected, the pulse could be felt at the wrist, and sensibility was gradually restored. In the second case a young lady fell into the lake, and was submerged, it is said, three minutes. The usual means for resuscitation, including electricity, were vainly tried for an hour, and recovery seemed hopeless. Four drops of glonoin were injected, followed by atropin, and within a short time the heart began to beat, the face flushed, and consciousness slowly followed. The third was that of a still-born child, delivered by the forceps, and apparently dead. Two drops of glonoin solution were injected over the pit of the stomach, and $\frac{1}{16}$ grain of atropin into the artery of the cord, again successfully. The fourth case was that of a man asphyxiated by an escape of coal gas, in which the injection of but one minim sufficed to speedily restore animation. In each of the cases, except the last, the quantity of the glonoin solution injected is very much larger than we are accustomed to use, and that of the atropin excessively so; from 0.01 grain to 0.02 grain of the latter is the usual dose.

Rectal Insufflation of Hydrogen in the Diagnosis of Abdominal Injuries. Dr. Wm. Mackie and Dr. Wm. J. Taylor (*Medical News*, Philadelphia).—The use of this gas was first proposed in these cases by Professor Senn, and demonstrated by him before the American Medical Association in May, 1888. A negro received a pistol shot in the abdomen, two inches to the left of the *linea alba*, and one below the costal arch. The ball was removed from the skin in the left lumbar region close to the spine. A four-gallon bag of hydrogen was connected with a wash-bottle half filled with water, so as to judge by the bubbling of the rate of issue, and the gas conducted therefrom by an india-rubber tube to an enema jet placed in the rectum. By steady pressure on the bag the previously flat abdomen was gradually distended, but no gas escaped from either opening made by the ball. But on subsequently pressing the abdomen itself, it escaped in intermittent jets, accompanied by blood. The assistants did not succeed in igniting the gas, but its escape was a sufficient proof that some part of the alimentary tract had been pierced by the ball. Laparotomy was then performed, and a great deal of blood found in the abdominal cavity; the source was traced after some search to division of the superior mesenteric vein, which was ligatured at both ends. On further search it was found that the stomach had been twice perforated by the ball. The wounds were closed by fine silk continuous suture, and the abdomen closed. There had been no escape of fecal or gastric matter, but the mesocolon and the mesentery had been perforated. The man died thirty-six hours afterwards.

In the second case a man had a fecal fistula on the left side of the abdomen, and the site of the intended incision depended upon whether the large or small intestine was in communication with it. The question would be solved by the escape of gas from the fistula before or after it was heard gurgling past the ileo-cæcal valve. One gallon of gas only was taken, and on gentle pressure it escaped by the fistula in less than half a minute, and before any sound was heard in the right iliac region. The gas readily ignited with the characteristic explosive snap, but in the daylight the flame was invisible. On opening the abdomen there was found carcinoma of the colon, so the wound was at once closed.

[Coal gas could be used for this purpose more conveniently, and quite as safely, as hydrogen.]

V.—NOTES FROM EGYPT.

Arabic Medical Journalism of the Present Day. The New Egyptian Medical Society, and the Visit of Professor Virchow. By James Grant Bey, M.D., LL.D. (*Continued from page 328*).—Professor Virchow's speech, of which we have given a literal translation, is stimulating and very practical. The backward condition of the Oriental is faithfully delineated, and in such a way as not to give offence, but rather to originate in the native mind a reflective quality, which would enable him to open his eyes and look along the empty vista of the past, and ponder over how he may be more fruitful in the future. He is not allowed much time for sleepy contemplation, as Virchow plainly states what is required to be done, in order that he may from

this date commence to leave landmarks behind him. Future generations will dilate on the grand start made by Virchow that led on in a scientific point of view to a thorough awakening and revolutionizing of the hitherto unchanging and apparently unchangeable Orient.

We were somewhat disappointed to find that Professor Virchow, in his anxiety to instil the fire and enthusiasm of a Haroun el Rashed into the breast of the present-day Arab, and the brilliancy of the ancient Alexandrian Greeks into his head, he forgot to give even a side glance at the Copts who have got some of the ancient Greek blood mixed with that of Mena and Cheops circulating in their veins, and who had their flourishing medical school at Heliopolis some 4,000 years before the Ptolemies saw the light of day, who had even as early as the 18th dynasty (1600 B. C.) got their medicine and surgery in as advanced a state as it was in the time of Galenus Claudius at the end of the 2nd century of our era. We should like to see the remnant of such illustrious ancestors also coming to the front and vieing with their ancient heroes in science and medicine. What has become of the Anatomical and Surgical works of King Teta of the 1st dynasty? and where can we find the working plans of the architects of the pyramids? Echo answers Where? In this respect we fear the Copt has a much longer vista of unfruitfulness to look back upon than the Arab, a circumstance which we hope needs only to be pointed out to him to make him reflect whence he came and whither he is going.

We have got an Arab University and Medical School, and it will be a happy day for the Copt when he too has got his own University and Medical School, but he must be up and doing, for no one is so soon helped as he who helps himself. It is this *laissez faire* motto that overshadows the Orient and leads to its being pushed to one side by the *faire Occident*.

Having thus referred to Professor Virchow's speech in a general way, we shall now make some observations on special points that he touches upon. He speaks of the truths of Medicine as being universal and indestructible like those of all the natural sciences. This statement pronounced in Cairo in the midst of many who faced 1883 in different ways was very *apropos*, and was no doubt meant to call us to order as medical men entrusted with the honour of our profession, and to rally us round the standard of truth. Outsiders may look on and listen, and, like an ancient celebrity, ask "What is truth?" and probably, like him, after they have put the question they will not wait for the answer, but the question has been too long now in being put to remedy matters, for the truth, outraged, has already commenced to re-vindicate herself without their aid, and in spite of them. (*Magna est veritas et prevalebit.*)

Old Father Time has stepped in and solved the burning question of the fraudulent endemic cholera of Egypt, before the classical work of Dr. Robert Kock was issued by the German Government, of which Virchow is a prominent member. This report is now being translated into all the civilized languages under the Sun with the exception of Arabic, but no doubt, after Virchow has put us so neatly on our proper basis, the Arabic translation will be taken in hand by the now declared progressive school of medicine of Qasr-el-Ainy, which is in duty bound to keep her students up to, if not in advance of the age.

The Constantine referred to by Professor Virchow, was a North African monk of the eleventh century, who supplied the medical school at Salerno with Latin translations of Arabic medical works. It is worthy of remark in this connection, that in those early times women's rights were respected, so that at this school we learn that there were lady professors; even this, however, is only in a modified degree comparable with ancient Egyptian times, when ladies had it all their own way, the gentlemen gallantly conceding to them much that the male sex now retains in its own hands. It sounds strange to us, but it is nevertheless true, that inheritance with the ancient Egyptian came through the female line, so that even the eldest son of a Pharaoh had to marry a princess of the Egyptian royal line in order to secure his throne. Now what has been, may be again, and there is nothing new under the sun. Many of us have little conception of our indebtedness to the monks *in partibus* who made themselves masters of the languages of the countries they consecrated their lives to regenerate, and, who, while thus engaged, translated numerous useful foreign works into an intelligible language. Constantine must have been pretty well occupied even if he had done nothing else but translate Arab medical authors, for the list of Arabic medical productions was a long one even in his day. Westenfeld has enumerated no less than three hundred medical writers in Arabic, while other historians give us a much larger number. The works of Paulus Aeginatas, a Grecian, who flourished in the seventh century, were translated into Arabic, and served as the leading authority on surgery in the Arabian schools all through the mediæval times. His surgery was the basis of that of Abu el Kassim of the 11th century, which, in turn, became the source of surgical knowledge in Europe in the middle ages. With the rise of the Moslem power, schools of medicine and hospitals were founded at the great centres. At Damascus Jewish and Christian teachers were employed in the medical school there, and it was principally Greek medicine that was taught, with a sprinkling of Persian and Indian therapeutics.

In Bagdad, under Haroun el Rashed (786 A. D.) and his successors, a flourishing medical school arose, and many Indians came to that school and thus carried back with them to India the Greek methods of dealing with disease, for, at the Bagdad school, a great number of Greek medical works were translated by the Jewish and Christian professors that were employed by the Kaliphs.

Mesua (a Jew) was a teacher in the Bagdad medical school, and was celebrated for his knowledge of drugs. Hannayn, a Nestorian Christian, who had studied in Alexandria, was the great translator and commentator of the works of Hippocrates and Galen. This and much beside were done for the Kaliphs Al Mamoon (813 A. D.) and Mutassim (842 A. D.). A large number of these translations were deposited in the library of Bona, in Khorassan (Persia), to which Ebu es Sêna had access, and, where no doubt, he derived his knowledge of Greek medicine. The Jews and Christians did much for Arab Medicine, which was at its most brilliant period from the tenth to the thirteenth century. The only real advance, however, by the Arabian school was in Pharmacy, and in the Therapeutical use of drugs. The Arabs produced the first Pharmacopœia, and were the first to establish Apothecaries' shops in their principal towns. In the eleventh century, Mesua, the younger, of Damascus, who was a Jew, wrote a standard work on Materia Medica, which was used in compiling the first London Pharmacopœia during the reign of James I. Early in the 12th century there was a medical faculty at Montpellier, whose members came from Moorish Spain. The above is an attempt to fill up some of the details that could only be hinted at in Virchow's short speech, and thus we hope we have made it more intelligible and instructive to the general reader.

After giving due praise to the Arab school as the simple conservator of Greek medicine, Professor Virchow plainly tells us that the Orientals have been, as far as original work is concerned, almost asleep since the time of the Ptolemies, when the Alexandrian school taught medicine, with the aid of dissection and vivisection. The long vista between the present Oriental and the Ptolemaic period is represented as being like a vast plain, so void of any striking object in the shape of original work in the past, of the Oriental school, that the distance seems to Orientals very much shorter than it does to European medical scientists, who have for centuries been erecting signal posts all along the line of original research. This is a hard hit veiled in somewhat parabolic language, but it is to be hoped that by hearing we may hear and understand, and act accordingly.

Dr. Virchow is delighted to find that there are already some signs of our awakening out of our long deep sleep, and he stretches out to us a friendly helping hand. Surely dissection and vivisection, and microscopic research, will now go on apace if we are to vie with the medical school of ancient Alexandria, and rise superior to the Arab copyists of the Kaliphs. Professor Virchow refers to the beneficent effect of the Egyptian climate, which he asserts has caused the disappearance of the plague from this country, but as the climate of Egypt has remained always the same, whether there was plague or not, we are inclined to think the professor errs from being ignorant of the vast sanitary measures carried out by Mahommed Ali, whereby the Delta was recovered from being in a great measure a pestilential morass by a system of canalisation, that before his day had been neglected, and which he made to include drainage as well as irrigation. It is this drainage that Mohammed Ali commenced that we need extended, so as to include the towns and villages and even individual houses; then, and not till then, can we expect parasitic diseases to be eradicated. In the mean time, while we wait for the sanitary authorities to propose the necessary measures, and the Government to carry them out, the School of Medicine is in for its work if it undertakes to study the life history of all the parasites that are about, as well as their germs, and the manner of their propagation in the human body. Now, indeed, is the time to do this work while there is material on hand, and the satisfaction arising out of it will have to be considered the best reward, till the budgets of public instruction and health are more flourishing.

We entirely agree with Professor Virchow's general statement that "many ameliorations are spontaneously produced here by the favourable nature of the climate of this country." Just think for a moment of the many pathogenic parasites that are desiccated, and thereby rendered inert by the heat and dryness of this climate. Consider, on the other hand, what would be the result if we were to have a drenching rain every few days, as in temperate climates, with all the filth we have above and below ground, and with our dangerous false bottomed cesspool system of storing excrementations and waste material. All this we have to concede to the learned and distinguished professor, but that the climate has by itself, without the sanitary aid of man, driven the plague from these shores we cannot and do not admit.

Few things we have of which to boast,

In sanitation point of view,

But when the truth's been fully told,

Let's to the worker give his due.

The visit of Professor Virchow to Egypt at this particular time has

been very opportune for the Egyptian Medical Society, and will be a stimulus to many of us to go to the 1890 Congress, who, perhaps, had not till now thought of going. There is one thing now certain, that the President of the Berlin International Medical Congress will give a friendly hearty welcome at Berlin to the members of the Egyptian Medical Society, and to those whose acquaintance he has had the pleasure of making during his short sojourn in Egypt, and that welcome will be all the more hearty if they can tell the Congress that much has been done to ameliorate the sanitary condition of the country since Virchow's visit—that the towns and villages have been supplied with potable water for man and beast, and the pestilential ponds around human dwellings drained away—that sanitary engineers have been employed for inspecting the existing houses and the immediate surroundings of the towns, with a view to their being made more healthy, and for drawing plans for the Government, which natives and Europeans alike must take into consideration in the building of new houses; plans that will regulate, in accordance with the laws of health, proper ventilation; methods of stowing away and removing excrementitious and waste matters; amount of air and light for each habitable room; expulsion of the lower animals from the family circle, except such as are considered fireside pets in civilized countries, etc. That the old Mosaic law, that every man, woman, and child should carry their spades with them, had been re-adopted to the no small relief of the olfactory organs of sensitive travellers. In fine that Egyptian sanitary science had again taken the lead, and had promulgated a law that all the world as well as Egypt should be washed at least once a day. This last salutary measure has had such a wonderful effect on Egypt, that the inhabitants are now swarming to such an extent that unless an immediate outlet is made for them they will demand not only the reclaiming of the paltry lakes along the north border of the Delta, but also the filling of Wady Raian with agricultural water, that the overflowing population may be utilized in cultivating the surrounding deserts!

This may be a fanciful picture, but, at the same time, it is not an impossible result of Virchow's visit to this old stagnant country. The sanitary authorities, however, must be assisted by the central Government, and ably supported by the Public Instruction Department, for the natives have yet to be educated up to the sanitary reforms that ought to be introduced without delay—reforms, however, that will never be efficiently carried out unless they meet with the co-operation of the people themselves. We would, therefore, in adopting the watchword "work, work, work"—given us by Virchow, add yet another—viz., "educate, educate, educate." And seeing that some of the heavy drains on the country's finances have been dammed back, causing an overflowing treasury, we may reasonably expect the Budgets of Public Instruction and Health to be considerably enlarged to allow of some of the reforms hinted at to be carried out before the meeting of the 1890 Congress. This would be the best guarantee we could give Europe that we were honest and earnest in our endeavour to improve the sanitary condition of the country, and to alleviate the misery of the inhabitants, for education and cleanliness are twin sisters, while ignorance and filth are inseparably linked together.

It was a happy thought on the part of the Cairo Native Medical Society to ask Professor Virchow to grace its meeting with his presence, not to mention to address it. This thought was all the more happy, seeing that Virchow acquiesced in both these particulars, and it is to be hoped that this entry in the minutes of the Society will prove an everlasting stimulus to its vitality. Long live that Cairo Native Medical Society, and may we soon hear of a similar society at Alexandria, where one treads on the sacred precincts of medical science. We hope the Cairo Medical Society will soon be affiliated to the British Medical Association, that now has its branches all over the world.

The Spirit of the Societies.

THE AMERICAN MEDICAL ASSOCIATION.

THIRTY-NINTH ANNUAL MEETING, HELD AT CINCINNATI,
MAY 8th, 9th, 10th, 11th, 1888.

(From our own Correspondent.)

Continued from p. 332.

AS YOUR journal was the means of materially assisting the American Medical Association, by publishing correct information about the International Medical Congress, and explaining the true cause of the disagreement, you will be pleased to hear that at the Cincinnati meeting there was a reconciliation—that is to say, the victors welcomed back the malcontents, and forgot and forgave. The American Medical

Association is as strong as the North was after the great war. The American Medical Association, the only great national medical association, was wounded by the few who strove to destroy it, but only in the same sense as the North was wounded by the South. Its own inherent vitality secured it against all assaults. It is now fairly secured in the hearts of the profession, and you must not take any notice of what correspondents write to your home journals as to the A. M. A. Disappointed men will try to throw a little of their venom. You cannot stop gadflies from buzzing, and those who gad to Berlin imagine they elevate themselves by throwing out little spiteful innuendoes in journals, which have been foiled in America, *re* the Congress. At Cincinnati we had some of the best surgeons and physicians in America, from all over the Union, and the published transactions will be probably the best ever yet issued by the Association. It is impossible, I find, to condense with anything like reasonable limits the work done by the sections, and it is not easy to select a paper or papers to give to your readers. If I give a few extracts, you can only take them as samples of what may be found in the published records.—NICHOLAS SENN, of Milwaukee, ought to be well known in Europe. He has left us some pen and ink sketches of the men he visited in Europe; on the whole very flattering, though he occasionally, I think, overstepped the line in his letters. As a progressive surgeon he is unequalled, and as an experimentalist his work will compare with any. He contributed a valuable paper to the Congress on some experiments he performed, in order to locate the seat of injury in penetrating abdominal lesions or wounds. These experiments exhibit a rare originality in research. He demonstrated to the Association the possibility of detecting the location of an injury of the bowels by the rectal insufflation of hydrogen gas, the gas escaping through the wound, and giving practical proof of its presence. This test was acknowledged to be perfect, and the exactness has been tested by other surgeons. The full text of his paper is too long, and your readers interested in abdominal surgery and gunshot wounds should consult the original paper. I have no doubt some American papers are to be found in your libraries, as the *Medical Register*, *New York Medical Journal*, *Journal of the American Medical Association*, *Annals of Surgery*, etc.

Dr. HENRY P. WALLATT, Cambridge, Mass., delivered an excellent address on State Medicine—a subject attracting considerable attention in the States, and a subject which must come more than ever to the front, in view of our growing cities and towns, and overflow of population in the most attractive centres, as New York, Philadelphia, etc.—Dr. E. H. WOOD made a report in the name of a Committee on Dietetics, and the subject of Infant Feeding was also well dealt with by a sub-committee.—The catering for the amusement of the visitors was well done. The physicians and artisans of Cincinnati vied with each other in trying to arrange for the comfort of the delegates, and we all came away with grateful and pleasant remembrances of this most successful gathering of the *elite* of the profession in America. This may interest American physicians now in Europe, who may not have an opportunity of seeing American journals.

BRITISH GYNÆCOLOGICAL SOCIETY, June 27th (Dr. Edis, president, in the chair). **Case of Ovariectomy in which the Mesentery Slipped into the Holes of the Drainage Tube.**—Dr. RICHARD SMITH called attention to an accident which had occurred to him in a case of ovariectomy, in which pieces of the mesentery slipped into the holes of the drainage tube and became strangulated and swollen so that the tube could not be withdrawn.—Dr. HEYWOOD SMITH suggested that if the nurse were directed to rotate the tube every few hours, it would prevent the same thing happening again. Even if some little pieces of omentum slipped in it would not have time to swell the tube up.—Dr. BANTOCK objected strongly to the remedy suggested, as likely to be hurtful to the patient, unless drainage tubes were removed. He remarked that the better plan would be to secure one with smaller holes.—Dr. SMITH, in reply, said he had since had another accident of a similar kind, which he had been able to overcome.

Dr. MURPHY, of Sunderland, showed a large ovarian tumour, which had been removed from a girl aged sixteen years; there had been no symptoms, and the rapid increase of the girl's abdomen had given rise to a suspicion of pregnancy. The true condition, however, was diagnosed by a medical man whom she consulted, and she was sent on to the infirmary. The tumour was removed without difficulty by the method of M. Pean, Paris, and the girl recovered without a bad symptom. No ligatures were employed, the bleeding pedicles being seized with pressure forceps, which, to the number of fifteen or twenty, were left in.—Dr. BANTOCK criticised the specimen, the appearance of which he thought hardly justified the recourse to so severe an operation.—Dr. ROUTH condemned the operation, which he thought had no advantage over abdominal section.

Dr. RUTHERFORD read the notes of a case of fibroid treated

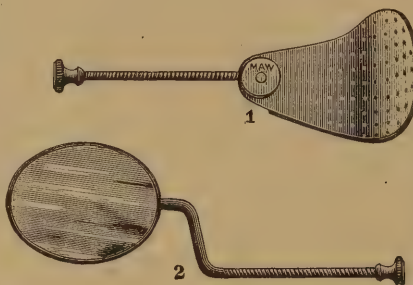
by electricity. The previous history of the patient was good. Menstruation became profuse at first; ultimately metrorrhagia superseded. For a year she had practically never been free from flooding. She first noticed a lump on the left side of her abdomen. She had been treated by several doctors for fibroids. She suffered from pain in the abdomen, back and thighs, and walking was difficult. There was a large fibroid on the left side. She was first given hydrastis canadensis (November 21st), and her condition improved. Electricity was then introduced with electrodes like those used by Apostoli, only wet cloths being used instead of clay. He began with a current of 100 milliampères. On another occasion spongio piline was used, and that time the skin was blistered. After this application (November 28th), she had a rigor, and the temperature went up to 104.2°. Till the end of January the condition of the patient was very critical, there being a high temperature with symptoms of septicæmia. The tumour, however, grew less. When she left the hospital, no signs of a tumour could be felt, and Dr. Edis, who had seen the patient previously, was of opinion that the fibroid had quite disappeared. The patient had written him she was very well, could now walk for miles, which she was not able to do before. In most of the cases the tumours only disappeared after the symptoms of septicæmia.—Dr. EDIS corroborated the statement as to his having diagnosed the presence of a tumour, which had subsequently disappeared.—Dr. FANCOURT BARNES said the patient did not appear to be suffering very much before the operation, though she narrowly escaped with her life. He thought the case was a valuable one, as an example of the danger of the electrical treatment, a fact of which so many people were unaware.—Dr. MANSELL MOULIN observed it was the first time a tumour had disappeared with only three applications of the current. No stronger evidence was needed to show that electrolysis had nothing to do with the retrograde change which gave rise to symptoms of septicæmia, beyond starting the process. He concluded that in the view of the impossibility of diagnosing the exact position of the tumour, and the probable result of the treatment, the use of electricity was simply empirical and highly dangerous.—Dr. BANTOCK said that this was the first statement they had of a definite case, and that Dr. Rutherford had not a word to say in favour of the treatment. He also mentioned that Dr. Playfair had stated on a previous evening that he had only employed electricity by piercing the tumour on one occasion, and did not propose to repeat it, a prudence which showed Dr. Playfair's wisdom.—Dr. FENWICK was also opposed to the treatment on account of the difficulty in localising the tumour.—Dr. RUTHERFORD, in reply, observed that in discussing the conduct of professional brethren, they ought to assume that their reasons and motives were the same as actuated the respective speakers. In reference to Dr. Bantock's remarks, he maintained that, far from not having a word to say in its favour, he thought the treatment offered great advantages when there was flooding or dysmenorrhœa. He agreed that the changes were not due to any electrolytic action, and joined with the previous speakers in urging that cases should be carefully watched and carefully reported.—The meeting then adjourned till October. * * *

OBSTETRICAL SOCIETY, June 21st (John Williams, M.D., president). Adjourned Discussion on the Papers read on Electrolysis in the Treatment of Women, by Drs. Steavenson, Lovell, Drage, Gibbins, and Shaw.—Dr. PLAYFAIR declared that those who had really mastered the technical details of electrolysis had never found that method useless; but, he said, cases should be treated by gynæcologists, and not left to professional electricians and to managers of the electrical department of hospitals. One might as well leave ovariectomy to the cutlers who made the instruments used in that operation. Dr. Playfair, after making several observations, declared that his clinical experience proved that electrolysis was an agent occasionally capable of doing much good. It might do much harm if injudiciously and unskilfully used; but that truth furnished no argument for rejecting electrolysis as a therapeutic agent, but rather demonstrated that the effects of the new method must be carefully studied, its indications noted, and its dangers detected and avoided.—Dr. PARSONS believed that electrolysis would prove successful in hæmorrhagic cases whenever the electrode could be made to touch the whole of the bleeding surface. He had sent out of hospital a few weeks ago a case where bleeding had been incessant for two years; after twelve applications it stopped, and since then the patient had had two normal periods, with only a slight show.—Dr. BANTOCK could not express himself in favour of electrolysis. There had been much assertion as to what this treatment was going to do, but nothing of what it had done. Dr. Playfair's cases had failed to convince him of the special advantages of the method. On moral grounds Dr. Bantock opposed the manner in which this system of treatment by electricity had become a fashion of the day. On reading a list of the various and opposite diseases for which electricity was recommended, one was reminded of the vaunted virtues of patent medicines, such as Holloway's, Buchanan's, Cockle's, and Widow Welch's pills. Dr. Bantock con-

cluded by saying he was still open to conviction, and he was content to allow others to pursue the electrical treatment provided it was done in a truly scientific spirit, free from that empiricism and imposture which at present characterised it.—Dr. ROUTH compared the opposition to electricity for women's diseases to the similar opposition to the sound and ovariectomy in past days. Dr. Routh, in 1872, cured two cases of large fibrous tumours by the electrical cautery, but the wounds made by the electrical agents then in use proved very troublesome to heal. This disadvantage was overcome by Apostoli's method.—Dr. CHAMPNEY considered that discussion on the subject, especially as to the permanency of success, was premature. Those who disbelieved in the method were neither ignorant, prejudiced, or inexperienced. Dr. Champney had heard of cases of suppurations, of septicæmia, and of death after the employment of this method, and regretted that these cases had not been published.—Dr. HEYWOOD SMITH thought the method should be systematically tried in untraceable cases of obscure pain.—The PRESIDENT did not object to Dr. Playfair's claim that electricity should be placed on its trial. It had already been tried in women's diseases. He said the literature on the subject was very disappointing, for it consisted mainly in the description of instruments and the mode of using them. Dr. Apostoli has, in fact, published little else except a series of general assertions and sweeping facts.—Dr. STEAVENSON felt some difficulty in replying to all these questions. He hoped it would be remembered he wrote his paper more than a year ago. Since then the method had undergone modifications. Turning to Dr. Playfair's remarks, Dr. Steavenson said that gynæcologists should not attempt this treatment without some knowledge of electricity, nor electricians without some knowledge of gynæcology. Dr. Playfair had urged that cases suitable for treatment could only be selected by men who had a superior knowledge of diseases of women. Dr. Steavenson had enjoyed that privilege at St. Bartholomew's Hospital.

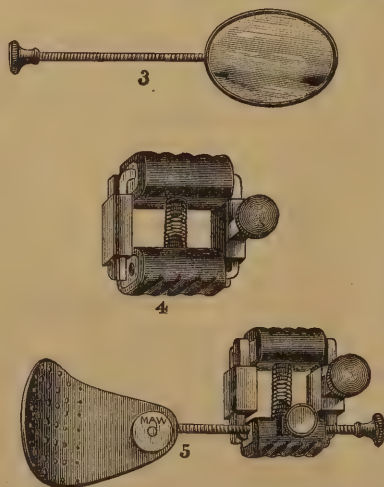
Surgical Aids and Appliances.

94.—NEW GAG, WITH THROAT GUARD.



DR. JOHN WARD COUSINS (Portsmouth) has devised a new gag, with throat guard, mouth mirror, and tongue depressor. It will be found of special use to dentists, and for operations on the mouth. It is manufactured by Messrs. Maw, Son, and Thompson, Aldersgate-street, London.

95.—THE DUCKER PORTABLE HOSPITALS.

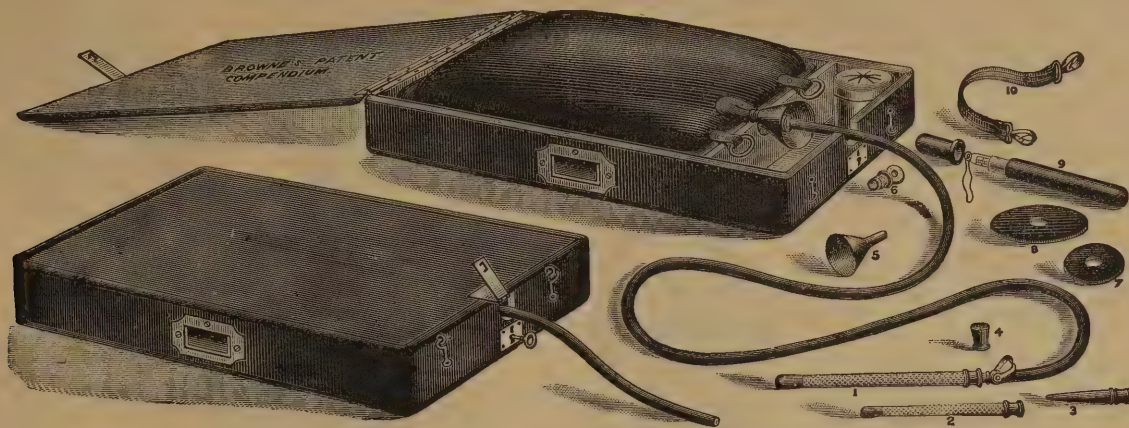


THE chief advantage offered in these buildings is the ease of transport of the materials, and the rapidity with which they can be erected by soldiers who have no special knowledge of construction, under the direction of an officer who can superintend the work after a short examination of the system employed. Dr. Walter Pearce, of the Artists' Corps, with ten volunteers belonging to ambulance detachments of several metropolitan

corps, was able to take down a field hospital 35ft. by 18ft., arranged for twelve beds, in thirty-five minutes, and to re-erect it in fifty-five minutes. The portable houses erected in Parliament-street will repay an inspection, and have already received the favourable consideration of the War Office authorities.

96.—THE COMPENDIUM OR INVALIDS' SELF-HELP.

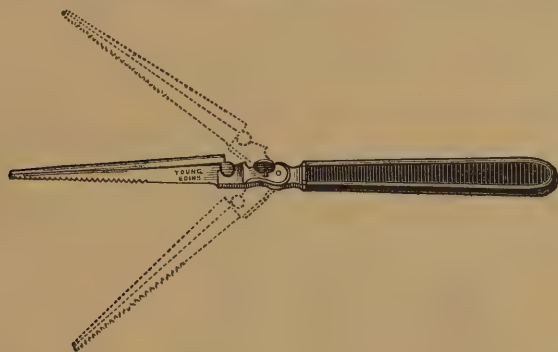
THE compendium consists of an india rubber bag, fitted in case, with tubing attached, so that it may be used as an enema, douche for



vagina, nose, etc. It can also be used as a hot water bag. It is an excellent contrivance. It is patented by Miss M. P. Browne, 9, Blandford-square, London, W., and may be obtained from Messrs. Hutchinson & Co., 70, Basinghall-street, London.

97.—REVERSIBLE NASAL SAW.

THIS instrument has been designed by Dr. Hunter Mackenzie for the removal of cartilaginous and bony obstructions in the nasal passages. The advantage it possesses are fineness of the blade, and by



means of a screw at the junction of the blade and the handle, a reversibility, which enables the operator to work from above or below, or at any angle that may be necessary. It is made by Mr. Young, Forrest-road, Edinburgh.

98.—SCAFE'S WATERPROOF BOOTS.

LEATHER and india rubber are combined in this boot. They are light, noiseless and durable. Mr. Scafe, 20, Albion-street, Leeds, is the patentee.



99.—BARRETT'S INDICATOR BOLT.

THIS simple and useful appliance, invented by Mr. Barrett, M.R.C.S., 25, Clarendon-road, Holland Park, W., is designed to afford a ready means of enabling the occupant of an apartment to indicate by a sliding bolt that he is engaged, and does not wish to be disturbed. The notice displayed on the outside of the apartment—by means of a handle moved on the inside—admits, of course, of any modification to suit particular needs. When the slide is shot the door is fastened, and at the same time the word "engaged" is shown on a white ground outside.

100.—TRUSS FOR INGUINAL AND FEMORAL HERNIA.

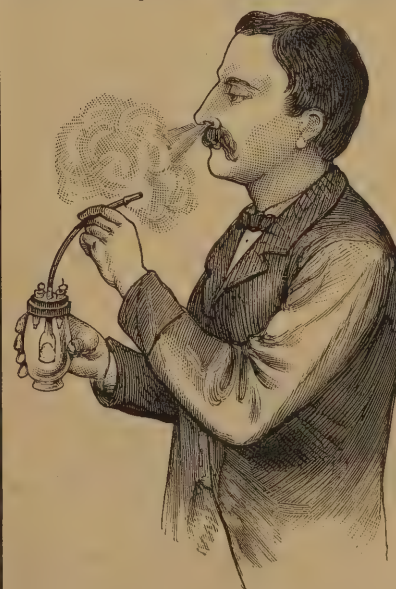
THE accompanying wood-cut shows a form of truss made for the last four years by Mr. Joseph Crichtley, 88, Upper Pitt-street, Liverpool, and has been highly recommended by Dr. Rushton Parker. It consists of a padded steel plate that covers the pubes both inguinal and femoral apertures, being held in place by a strap round the waist, and two between the thighs. The plate is almost triangular, its upper side, with rounded corners, lying horizontally

above the pubes, but instead of a lower angle there are two wings, and between them a space cut out to fit around the male genitals, which are thus closely embraced at their root.

101.—GODFREY'S PATENT CHLORIDE OF AMMONIUM INHALER, FOR CATARRH OF THE EAR, NOSE, AND THROAT; ALSO FOR HAY FEVER.

Now that chloride of ammonium is being so generally prescribed for hay fever, bronchial asthma, and post-nasal catarrh by the profession, a simple and efficient instrument—one which can safely be placed in the hands of the public—has been much needed. Godfrey's Patent Chloride of Ammonium Inhaler is of the simplest possible construction, yielding a large volume of perfectly neutral chloride of ammonium vapour, practically placing its administration on quite a new basis. This apparatus differs from all previous forms in the fact that it contains no water; for it has been found that when the crude vapour of chloride of ammonium is drawn through moist sponge, it issues in a state of great purity and with little loss; there is also much less effort required in drawing the vapour into the lungs.

The inhaler consists essentially of three tubes passing through an india-rubber stopper which closes the inhaler bottle; the central tube is bell-shaped, to contain



the moistened sponge, and to this tube is attached the mouth-piece. There are two smaller tubes, each carrying a porous cylindrical tube. One of these is dipped into hydrochloric acid, and the other into solution of ammonia. When suction is applied at the mouth-piece, air passes through these porous bodies, and becomes charged with the vapour of acid and ammonia. These vapours mix in the body of the inhaler, and combine, forming chloride of ammonium, which leaves the moist sponge in a perfectly neutral condition, suited for contact with the most delicate mucous surface.

This form of apparatus specially lends itself to the administration of other volatile substances, either separately or in admixture with chloride of ammonium, the vapour of which may be rendered agreeably stimulating by the addition of a few drops of pumilio pine oil on the moist sponge. It has also the advantage possessed by no other inhaler in the market, of not becoming clogged during or after use. The tube does not get plugged up, nor does the white moss-like deposit accumulate upon this inhaler, giving the patient vague alarms that something is wrong. A medical friend, to whom we remitted one specimen for experiment, speedily asked for two more, in order that he might make a more extended observation than was possible with only one instrument, as he had a large infirmary, and, consequently, a very wide field. He reports as follows:

"I have, during the last month, made a considerable number of observations with the inhalers you placed at my disposal for trial—and the results in acute exacerbations of emphysema and chronic bronchitis, as well as in nasal and pharyngeal catarrh—have quite exceeded my anticipations, based on results obtained with other inhalers. My reasons for this are: firstly, there is no comparison between the ample volume of vapour of soothing, non-irritating character produced by this new apparatus and the older ones; secondly, the short breasted livid patient can inspire as easily through the apparatus as without it, no powerful suction being required to draw the air through; and, thirdly, it is a great advantage starting with fresh acid and ammonia of the right strength each time of using, such re-charging and cleaning being done with the greatest facility.

In quite two-thirds of the cases the alleviation of dyspnoea, lividity and insomnia, the lessening of cough, the facilitation, and the general relief to the patient, have been very marked, but it does not improve *every* case. In more than one; however, there has been immediate relief of dyspnoea following the first use. I consider your apparatus places ammonium chloride inhalation, in the above conditions, on quite a new footing, and makes it one of the most valuable and *generally* reliable means I know of giving relief, and I shall certainly seize the first orthodox opportunity of bringing my experience before my professional brethren for comparison. In the meantime I have daily about twenty patients who are using the inhalers here, for the loan of which I am much obliged."

From the observation we ourselves have been enabled in a lesser measure to make, we feel convinced that this report is no more than the exact truth, and we hope to see the apparatus in question, which is most moderate in price, in universal use. It has been tried in phthisis with complete success; in a case of hay fever it alleviated to quite a bearable extent the sufferings of the patient, who until now had been unable to find relief, and we are confident that in less stubborn cases it would produce entire cessation of this mysterious ailment.

102.—ALLEN'S HOT WATER AND ICE BOTTLES.

MESSRS. ALLEN & Co., London, have produced some novel and



Fig. 1.

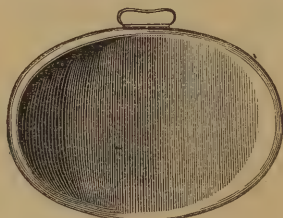


Fig. 2.

useful bottles in white polished metal, for applications of hot water or ice to chest, stomach, or head. The bottles are anatomically shaped,

so as to fit comfortably to the parts. These bottles are cheap, and well made. Figs. 1 and 2 represent the upper and under surfaces of



Fig. 3.

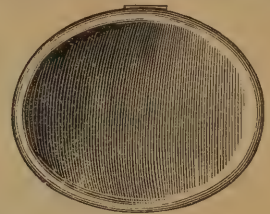


Fig. 4.

the hot-water stomach bottle. Figs. 3 and 4 the upper and under surfaces of the ice stomach bottle. Figs. 5 and 6 represent the upper



Fig. 5.

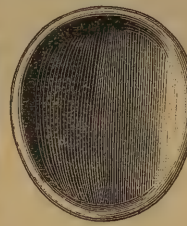


Fig. 6.



Fig. 7.

and under surfaces of the ice cap for the head, and fig. 7 represents the ice or hot-water bottle for the knee or leg.

103.—SALT'S IMPROVED READING, WRITING, AND DRAWING EASEL.

MESSRS. SALT, Birmingham, have devised an easel, cheap, elegant, portable, and simple in contrivance, to prevent boys or girls from contracting their chests and their spines when writing or drawing. It is made of polished birch, and forms a seemly article of furniture; the hanging flap, having a bead for the retention of the writing materials, is so arranged that it may be lowered from the horizontal



position to any requisite angle by means of a neat quadrant on either side, so that the student may sit in the position most approved by the medical attendant and most convenient to herself. The height of the desk may be raised or lowered at once by a simple lifting arrangement to suit different statures, and the whole folds up in a remarkably small space.

104.—MEMBRANE ASPIRATOR.

THIS instrument is designed to obviate the necessity of applying the mouth in order to suck out any obstruction. It consists of the



ordinary bottle, fitted with exhaustor. It has been designed by T. F. Pearse, Esq., and is made by Messrs. Arnold & Sons.

Medical Miscellanea.

THE subject of next illustration will be John Wood, Esq.

One of our most brilliant medical writers has passed away, in the person of John Milner Fothergill, M.D. He was a fertile author, and his books were eagerly read by the profession here and in America.

The *Illustrated Medical News* is the newest candidate for medical favour. Judging by the sample, it promises to be an extensively got-up paper, and aims high.

Mr. J. Aloysius Blake, of Westland-row, Dublin, has left £1000 to the public hospitals in Ireland, and £500 to St. Mark's Hospital. Mr. John Baker, Holloway, bequeathed £500 each to the London Fever Hospital, the Central London Throat and Ear Hospital, the Great Northern Hospital, the Holloway and North Islington Dispensary, and the Royal Hospital for Incurables.

ASHBY-DE-LA-ZOUCH BATHS.—Our English health resorts are coming to the front; not before it was time. We are taking lessons from our continental neighbours abroad; wherever there are mineral springs, the local inhabitants regard them as royalties; they work them as though they had found lead or iron. They erect villas, hotels, cafés, baths; they strive to attract visitors; they publish glowing accounts of the virtues of the waters. They do not always speak the truth, but the great end is attained, the people come. The baths of Ashby-de-la-Zouch were installed at a grand luncheon on July 24th, and we trust that the efforts of the shareholders will be rewarded. We shall in September more fully refer to the opening.

BACK-TO-BACK HOUSES.—We have received the joint report of Dr. Barry and Mr. P. Gordon Smith, "On Back-to-Back Houses," and we are rather astonished at some of the information it contains. Back-to-back houses have been condemned by the best sanitarians, but we find that the erection of this class of house is on the increase. In Halifax in 11 years—1876-1886—2,094 houses were built, 807 through, 1,287 back-to-back. In Morley, out of 267, 48 only were through, 219 being back-to-back. In Leeds Urban, out of 2,311, 800 were through, and 1,502 back-to-back. Local option is here applied, and it certainly works in a backward direction. We shall more fully analyse this valuable report in our next issue.

DAHL'S DYSPEPSIA CAKES.—The indefatigable Dahl Company, who last year introduced their cakes to the medical profession, now produce a variety for the use of children; they are rather nicer than those first introduced, and have more the taste of the slice of bread and salt we remember the administration of in early youth, for the suppression of bile after a party; but the cakes are much more palatable in appearance than that ancient remedy, and, broken into a basin of bread and milk, will be accepted by the children without a protest. Messrs. Dahl are supplying a want that our over-refinement—caused by our use of too fine—occasionally demand, and in no better medium than this can it be administered.

According to the *Vratch*, the *Archives Slaves de Biologie*, edited by Dr. M. Mendelsohn, of St. Petersburg, will shortly be replaced by the *Revue Slave des Sciences Médicales*, under the same editorship. Thy new journal will appear twice a month, and will acquaint the West of Europe with the chief matters medical, published in the Russian and other Slavonic languages.

Robert Prosser White, Esq., M.B. and C.M. Ed., M.R.C.S. Eng., was the recipient of a handsome illuminated address on June 21st, 1888, given for his services by the members of the Wigan Medical Society, he having acted as honorary secretary for a period of five years. Mr. White, we may remark, was for some time house surgeon to the Halifax Infirmary before he settled in practice in his native town of Wigan.

Glasgow had a narrow escape from an importation of small-pox. A well-known football player came from Preston to Glasgow to engage in a match, but was unable to play owing to his not feeling well. He went to his parents in Kilmarnock, where his illness developed into small-pox. He had, however, slept one night in the hotel; fortunately the room had not been occupied, so that everything was disinfected.

The latest fashion of advertising in America is to put the name of the accoucheur in the birth column in this wise:

"FLAMIN.—Saturday, the 9th inst., at 8-15 A.M., to the wife of D. W. Flamin, of College Hill, a ten-pound boy. Thanks to Dr. Wallingford, of Cincinnati.

"GALLION.—June 5th, to Mrs. Nona Gallion, of Liberty-street, a nine-pound girl. Thanks to Dr. Wallingford."

One would suppose that Messrs. Flamin and Gallion would claim some thanks.—*Medical Record*.

SKEGNESS.—Skegness is an ideal place for children. There are miles of soft sand in which they can dig, whilst the sea shore allows them to indulge in the favourite pastime of wading, without danger. The usual accompaniments of sea-side life are to be found. There are ponies, donkeys, merry-go-rounds, switchback railways, etc. The sea bathing can be indulged in all day long, but more particularly when the tide is in. Those who do not like the open sea can resort to the baths. The baths are a handsome structure, tastefully designed, and built of red brick. There is a splendid swimming bath, seventy feet long by thirty feet wide; depth, three feet six inches. Swimming entertainments are given by Prof. Marsh: there is accommodation for 300 people. The water is kept at a uniform temperature. There is a ladies' bath, forty feet by thirty feet; depth, five feet three inches. There are also hot and cold baths, and a very good Turkish bath. The dressing-rooms are excellent. Skegness pier very much resembles the one at Hastings, and is a striking feature of Skegness. An excellent band plays thrice a day in the pier pavilion, varied by vocal music of a high-class character. There are tastefully laid out pleasure gardens, where there is also a good band, tennis ground, etc. The Skegness cricket ground, tennis lawn, etc., is famous. We can only this month allude to a few of the attractions of this charming Lincolnshire health resort.

Correspondence, Notes, and Queries.

Communications, Books, etc., should be addressed directly to the EDITOR, "The Provincial Medical Journal," Horton House, Halifax.

Matters of business should be addressed to the Publisher, at the Offices, 10, Friar Lane, Leicester; or to the London Representative, Mr. E. BELLA, 58, Charing Cross Road, W.C., to whom all communications respecting Advertisements should be addressed.

We cannot undertake to return rejected MSS. unless stamps sufficient for their postage are enclosed.

We shall be glad to receive reports of Medical Vacancies, Appointments, Meetings of Societies, etc.

Papers containing passages for consideration should be marked.

Correspondents must please attest their communications with their proper name and address (not necessarily for publication).

Contributions must be written on one side only of the paper.

MSS. intended for publication to be sent in not later than the 16th of the month.

The insertion of any letter in these columns cannot be taken as necessarily indicating our adhesion to the views or statements therein expressed. The same remark applies to articles to which a name or nom-de-plume is attached.

NEALE'S "DIGEST."

To the Editor of "The Provincial Medical Journal."

DEAR SIR,—I always welcome the *Provincial Medical Journal*, and have read it from the first number. Your strictures and remarks on men and things are usually so wise and just that I want to say a word, in *re* Neale's "Digest," on behalf of which you take up the cudgels in the number for the current month. I have often "looked up" my copy, and the last time I saw it was sticking out of the dust-bin, to which I had relegated it; not because it was "not a library," but because in the absence of the journals to which it refers, it was practically (and for urgent cases especially) useless. There are better indices of disease and their remedies than Neale's; many men hold this opinion with myself, though we may be written down as "apes" and "dullards," and "untrained" by Dr. Neale and his friends. The doctor, indeed, politely hints, in a recent number of the *British Medical Journal*, that those who buy his book, and do not like it, are in the position of certain "swine" who knew not how to value pearls when found! "A Daniel come to judgment." You remember the old proverb commencing "Tot homines," and should give us credit for differences of opinion.—Believe me, dear sir, yours faithfully,

F.R.C.S. EXAM.

THE PROFESSION AND CERTIFICATES OF DEATH.

To the Editor of "The Provincial Medical Journal."

SIR,—May I make use of your columns to call attention to a no little grievance from which we general practitioners more especially suffer, through giving a conscientious opinion as to the cause of death, and the consequent need of some alteration in the custom of giving certificates of death to the relatives of the deceased patient? Only last evening I was sent for to see a patient whose sister had just died. The lady was in much mental perturbation, and annoyed with me because I had on her sister's certificate of death added "*alcoholic*." After stating disease of the liver as the cause of death, I offered to cross out the objectionable adjective; but that was not sufficient, and I was requested to write a fresh certificate, to which I consented with reluctance. I feel by complying with the wishes of our patients, as to what we shall return or omit as the cause of death, is hardly consistent with the dignity of the profession or the interests of the public.

There are people who object to our giving cancer, scrofula, or even phthisis, as the cause of death; and as to syphilis being a cause of death, we seldom dare give it. But this feeling is frequently the case when the death has been produced by the *abuse of stimulants*, and we cannot shelter ourselves in these latter days by a Latin term. The public now fully know what is meant by cirrhosis, malignant or strumous disease; and they ought not to have the opportunity of indulging curiosity or of criticising the certificate of death—at least, not until it has been officially given to the Registrar. At page 19, in a pamphlet I published on "The Wants of the General Practitioner," I mention that "Death certificates *should be paid for* by the State for whose benefit they are given, and that they ought no longer to be exacted from a hard-worked and laborious profession." Now if we were paid for the death certificates, we should no doubt be expected to send the certificate direct to the Registrar of Deaths, as we ought to do, and the occasion would not then arise (as they would know it would be of no use) for the relatives to question the doctor as to what he should insert or omit on the certificate of death, as is now often the case, and the statistical value of the document considerably lessened. I have offended more than one patient by the certificate of death I thought right to give. I trust you may find room for this letter, and oblige,

Your obedient Servant,

July 10th, 1888.

FREDK. H. ALDERSON, M.D.

THE "SHIFA."

To the Editor of "The Provincial Medical Journal."

DEAR SIR,—I trust you will allow me to correct an inaccuracy in Dr. Grant Bey's "Notes from Egypt," which appeared in your number for July. The Sanitary Department Journal, *El Saha*, has not been rewarded at the expense of Dr. Schmeil's paper, as the Bey's remarks would lead one to suppose. On the contrary, when the subvention was withdrawn from *El Shifa*, the same economical measure was likewise applied to *El Shifa's* child, as Dr. Grant Bey so wittily calls *El Saha*, both journals being equally abandoned to sink or swim as best they could without further Government aid. The Sanitary Department was in no way responsible for this treatment, which owed its origin to one of those throes of retrenchment which periodically devastate the land, but the editor of *El Shifa* thought otherwise, and immediately commenced an action at law, which has resulted in heavy damages against the foster-parent of his own journal's offspring! Whether such a proceeding on

his part is in accordance with the *high falutin* which drew forth the Minister's reprimand, I must leave to the appreciation of the readers of the *Provincial Medical Journal*, merely adding that *El Shifa* was started before the subvention was accorded; that the latter was a free gift; and that in no other country in the world could damages have been obtained for its discontinuance.—Yours truly,

H. R. GREENE.

Bibliographical Record.

BOOKS, PAMPHLETS, ETC., RECEIVED.

- The Principles of Cancer and Tumour Formation. By W. Roger Williams, F.R.C.S. London: John Ball and Son.
Prevention of Infective Fevers and the Use of Disinfectants, with Notes on the Health of Children. By William Squire, M.D., L.R.C.P. (Lond.) London: J. and A. Churchill.
Nerve Prostration, and other Functional Disorders of Daily Life. By Robson Roose, M.D., L.C.S. London: H. K. Lewis, 135, Gower-street.
Bruck's Guide to the Health Resorts in Australia, Tasmania, and New Zealand. London: Baillière, Tindall and Cox.
The Construction and Maintenance of School Infirmaries and Sanatoria. Prepared by the Council of the Medical Officers of Schools Association, with plates. pp. 46. London: J. and A. Churchill.

PERIODICALS RECEIVED.

AMERICAN:—

1. The Journal of the American Medical Association.
2. The Therapeutic Gazette.
3. Medical Register (Philadelphia).
4. New York Medical Journal.
5. Medical Record (New York).
6. The Medical Bulletin (Philadelphia).
7. New England Medical Monthly.
8. Medical Times (Philadelphia).
9. The Polyclinic (Philadelphia).
10. The Analectic.
11. The Medical Standard (Chicago).
12. The St. Louis Medical and Surgical Journal.
13. The Denver Medical Journal.
14. Annals of Gynecology (Boston).
15. The Medical News.
16. The American Lancet.
17. The Medical and Surgical Reporter.
18. The American Druggist.
19. The Western Medical and Surgical Reporter.
20. The South Western Medical Gazette (Louisville).

BRITISH:—

21. The Philanthropist.
22. The Practitioner.
23. The Medical Chronicle.
24. The Medical Press and Circular.
25. The Journal of Microscopy and Natural Science.
26. The Indian Medical Gazette.
27. The Australasian Medical Gazette.
28. The Hospital Gazette.
29. The Journal of Rhinology.
30. The Birmingham Medical Review.
31. The Ophthalmic Review.
32. The Pharmaceutical Journal.
33. Public Opinion.
34. Health.
35. The Chemist and Druggist.
36. The British and Colonial Druggist.
37. The Australasian Journal of Pharmacy.
38. The Nursing Record.
39. Diet and Hygiene.

FRENCH:—

40. Journal de Medecine de Paris.
41. L'Union Medicale.
42. Le Progrès Medical.
43. Bulletin Général de Thérapeutique.
44. Gazette de Gynecologie.
45. Gazette Hebdomadaire des Sciences Medicales.
46. Journal de L'Ouest.
47. Journal du Nord.
48. Revue Pratique d'Obstetrique et d'Hygiene de l'Enfance.
49. Annales de Gynécologie et d'Obstetrique.

GERMAN:—

50. Centralblatt für Kinderheilkunde.
51. Centralblatt für Gynecologie.
52. Centralblatt für Chirurgie.
53. Illustrierte Monatschrift der Artzlichen Polytechnik.
54. Der Fortschritt.
55. Fortschritt der Medicin.
56. Chemiker Zeitung.

ITALIAN:—

57. Lo Sperimentale.
58. Rivista Italiana.
59. Rivista Internazionali di Medicina.

PORTUGUESE:—

60. A Medicina Contemporanea.

RUSSIAN:—

61. Vrach.

SPANISH:—

62. Rivista Clinica de Barcelona.

TURKEY:—

63. Revue Medico-Pharmaceutique (Constantinople).

Copies of Index for 1887 may be obtained at office, 10, Friar Lane, Leicester.

THE Provincial Medical Journal:

A MONTHLY REVIEW OF MEDICAL SCIENCE, LITERATURE, AND BIOGRAPHY.

VOL. VII.]

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[No. 81.]

Our Portrait Gallery.

JOHN WOOD, F.R.S., F.R.C.S. ENG.

OF the many portals to the medical profession, pupilage at one time deservedly found a favourite mode of entrance. Pupilage, like many other good customs, has gone out of fashion. The testimony of many of our most eminent practitioners of the the present day is to favour a return of the old system, leaving out the abuses which attached to it. Sir Spencer Wells, but a short time ago, in an address at the Leeds School of Medicine, bore testimony to the value of the experience he had when a pupil of a general practitioner at Barnsley, the late Thomas Michael Sadler. Sir James Paget has also been able to speak favourably of his own experience. "As a constant rule," said Sir James Paget, "the best students, and they who have proved themselves the best, not only in the schools, but in after life, have been those who in the beginning of their studies, and for the most part before attending lectures, have been pupils in provincial hospitals, or with active and intelligent general practitioners, who have enabled them to see practice every day, and helped them to study it. . . . The best students are those who have from first to last, and always, continued the study of actual practice with that of the principles and foundations of the profession; or who, if they have begun with one of these, have begun with practice, and then studied the principles together with it."

In the life of Dr. Myrtle, of Harrogate, in the *Provincial Medical Journal*, May, 1887, it was recorded that Mr. John Wood was under him as a pupil. Dr. Myrtle soon saw the genius of his pupil, and urged him to devote himself entirely to surgery. The correctness of that advice has been abundantly proved in the success of this distinguished surgeon.

Mr. John Wood was born at Bradford. He was educated at a private school, and King's College, London, and

was then apprenticed to the senior surgeon of the Bradford Infirmary. In 1846 he entered King's College Hospital, gaining four scholarships and two gold medals, and becoming House Surgeon in 1850. He was then appointed Surgeon to the Lincolns Inn Infirmary. After being Demonstrator of Anatomy at King's College he gained successively the posts of Examiner to the Universities of London and Cambridge, and to the Royal College of Physicians; he became Professor of Surgery at King's College, and F.R.S. in 1871; Examiner to the Royal College of Surgeons (at which he was one of the Council, and subsequently chairman to the Court of Examiners); and in 1885 he became Hunterian Professor of Surgery and Pathology. Professor Wood has published a large number of lectures, articles, and papers on medical subjects.

The following is an incomplete list, but includes his chief contributions to medical literature: "On Rupture: Inguinal, Crural, and Umbilical," 1863; "Hernia and its Radical Cure" (Hunterian Lectures), 1885; Article on "Pelvis" in Todd's *Encyclopædia of Anatomy and Physiology*; "New Method of Operating for Radical Cure of Hernia" (*Transactions of the Medico-Chirurgical Society*, vol. xliii); "Method of Extracting a Stone by Urethrotomy and Dilatation of Prostate" (*Proceedings of the Medico-Chirurgical Society*, vol. iii.); "New Theory of the Cause of Obliquely Ovate Pelvis" (*Transactions of the Pathological Society of London*, vol. vii.); "Subcutaneous Ligature for Nævi;" "On Muscular Variations in the Human Subject" (*Proceedings of the Royal Society*, 1864 to 1868); "On Fission and Extroversion of the Bladder with Epispadias" (*Transactions of the Medico-Chirurgical Society*, vol. lii); "On the Muscles of Neck and Shoulders" (*Philosophical Transactions*, 1870).

We need hardly mention that Mr. Wood is a member of the best medical societies of London, and that his reputation as a surgeon is cosmopolitan.

Original Communications.

NOTES ON SIX CASES OF INTRA-CRANIAL TUMOUR.

By C. J. BOND, F.R.C.S.,

SURGEON TO THE LEICESTER INFIRMARY.

(Continued from p. 355.)

CASE 4.—*Tumour of Medulla—Tubercular?*—S. B—, female, æt. twenty-four. Patient was confined five months ago at full time, and has not been well since, and for the last two months her friends say she has been at times “queer” in her mind—i.e., emotional or depressed. On February 25th, four days before her death, she walked into the ward without assistance. She has, however, a somewhat shuffling slow gait, and walks with her legs far apart, and her eyes on the ground. She cannot mount any raised step, and complains of the light hurting her eyes. There is no paralysis, or any loss of sensation, but the patella reflexes are increased. The patient has a peculiar whining, depressed way of talking, and the case was diagnosed as one of hysteria. She died suddenly on sitting up in bed, four days after admission, from syncope.



CASE 4.—Tubercular (?) Deposit in Medulla—Cerebellum removed. Growth has been incised. Photograph shows Fourth Ventricle laid open.

Post-Mortem.—A growth or deposit, the size of a walnut, was found occupying the left half of the medulla, and projecting chiefly on the upper surface; it extended from a little above the left auditory striæ, which was stretched over it to a little below the lower angle of the fourth ventricle, and pressed into the under surface of the cerebellum.

Microscopical examination showed the tumour to be composed of small round cells, but it could not be absolutely decided whether it was syphilitic or tubercular in origin. The cause of death was evidently pressure exercised by the growth on the floor of the fourth ventricle. There was no deposit of any kind in any other organ.

CASE 5.—*Cyst of Cerebellum.*—M. C—, female, æt. eighteen; a healthy girl, with a good family history. Nine weeks ago patient had a fall on the back of her head (not from any height). She was not unconscious at the time, but suffered from headache for some days afterwards. Six weeks ago she began to vomit in the early mornings; there was no peculiarity of speech or manner noticed by her friends, except that she fancied peculiar—and to her unusual—things to eat, and had an impression, which she stated, that she should die. Fourteen days ago her gait became characteristic, that is, staggering as if drunk. Before this occurred she had attended the out-patient room, and had been treated for dyspepsia. Admitted on March 6th, and on March 7th she became rather drowsy towards evening, when she sat up in bed, turned pale, and died suddenly from syncope.



CASE 5.—Cyst of Cerebellum laid open—Anterior and Upper Surface. Photograph shows Upper Surface of Cerebellum divided down middle line, halves pulled aside, exposing Fourth Ventricle.

Post-Mortem.—On the upper and anterior surface of the right hemisphere of the cerebellum was a cyst the size of a large nut; it had a distinct cyst wall, which could be easily separated from the surrounding brain substance without tearing the latter. It projected into the cerebellum to the depth of half an inch, and inwards to the flocculus and side of the pons, and came in contact with the right



Yours very sincerely
John Wood

seventh and eighth nerves as they issued from the medulla; and by pressure on the latter may thus have caused death. The contents of the cyst were a clear yellow fluid, like hydrocele fluid, in which microscopical examination showed only a very few cellular elements, and those apparently leucocytes. No blood or pigment.

CASE 6.—*Sarcoma of Optic Thalamus (Left).*—J. B—, æt. fourteen. Previously healthy, intelligent lad; good family history. Present illness commenced four months ago, the first symptoms noticed being that he took longer than usual to articulate his words, and made sudden "grabs" at things he wished to take hold of; he has also occasionally passed his urine and fæces involuntarily. The case was diagnosed as one of chorea. On his admission into the infirmary, patient cannot walk without assistance, but falls sideways to his right side. He gives sensible answers to simple questions, but cannot answer complicated ones. Knee jerk increased on left side; diminished on the right. Superficial plantar very marked on left side; absent on the right. Slight loss of power in grasp of right hand as compared with left. No paralysis of face or tongue. Soon after admission the right forearm, hand, and fingers became fixed in the flexed position. Both discs are in the white atrophic stage, succeeding optic neuritis. Patient vomits occasionally. From this time the history of the illness is that of gradually increasing unconsciousness; but he still, when asked, answers his name slowly, and with a drawl, and after an interval of one minute after the putting of the question. There are occasional attacks of tonic spasm affecting all the limbs, and producing opisthotonus, lasting two hours and five minutes, with stertorous breathing; and on one occasion horizontal nystagmus of both eyes, chiefly to the left, but also with oblique rotatory movement. Towards the end blebs appeared on the feet, and the lower segments of both corneæ, where uncovered by the upper lids, sloughed. Temperature averaged 99° to 101°, with, for the most part, a distinct morning fall. Patient died comatose five months from commencement of illness.

Post-Mortem.—Enormous collection of clear serum in the lateral and third ventricles, evidently secondary to the pressure exercised by the growth on the velum interpositum. No meningitis. In the left hemisphere is a large infiltrating growth, the size of a hen's egg, which apparently originated in the outer part of the left optic thalamus, but which has infiltrated that, and passed across to that of the opposite side. No deposit in any other organ.

Remarks.—The notes of the above cases are taken from the records of patients who were under the care of the colleagues of the writer at the Leicester Infirmary, and are used with their permission. The cases occurred some time ago, before the safety of intra-cranial operations were so clearly demonstrated by the labours of Horsley and others. The cases are described very shortly, and only the leading symptoms are given; yet owing to the increased interest attaching to these affections, it appeared to the writer that even a short description of a group of such cases might be useful.

The first and second cases are examples of an infiltrating form of new growth, arising deeply in the white matter, and rapidly invading the surrounding parts. In the second case the growth was double, though not symmetrical in position in each hemisphere; the typical signs of gradually increasing and extending paresis were present, such as are found in diseases of the motor area, and both cases were at the time they were first seen unrelievable by operation.

The third case is an example of tumours of the frontal lobe, and could, no doubt, if treated early, have been relieved or cured by operation; but here I should like to draw attention to the fact that a gradually increasing apathy, or want of interest in surrounding circumstances and apparent desire to be left alone, was the main or leading symptom in this case, as in one of abscess of the frontal lobe, to be mentioned elsewhere, and, in the absence of any motor phenomena, at the commencement of the illness, this may be a guide of some value. Had the operation been undertaken after the occurrence of the partial paresis of the right arm and leg, I have no doubt the trephine would have been applied in the neighbourhood of the fissure of Rolando, and this would have given rise to difficulty, as the symptoms were not due to immediate pressure, but to pressure from some little distance from this spot; the large tumour being here at some distance from the surface, and coming close to the surface of the grey matter only, at the anterior extremity of the frontal lobe.

The peculiar alveolar structure of the growth also deserves notice. In the fourth case the growth was probably of a tubercular origin; the absence of any paralysis from pressure on the left side of the cord was remarkable, considering the size of the tumour, but is probably to be explained by the position of the growth on the upper or posterior aspect of the medulla, thus allowing a more ready increase in size. The sudden death was probably due to its close proximity to the important nuclei in the floor of the fourth ventricle.

In the fifth case two views might perhaps be taken as to the origin of the cyst in the cerebellum. One that it originated in a congenital inclusion of some portion of pia mater and arachnoid, as described by Mr. Sutton. Its position at the anterior and inner portion of the cerebellum, and the clear serous nature of its contents, are in favour of this view. Or secondly, that it was due to the extravasation of some blood at this spot at the time of the accident, nine weeks previously. The distinct cyst wall, and the absence of any blood or blood pigment in the contents, are against this supposition. It had none of the characters of a hydatid cyst. The symptoms were characteristic of cerebellar tumour, and as far as our present knowledge goes, could hardly have been reached by operation.

The sixth case is a good example of an infiltrating growth, starting in one of the basal ganglia, and the symptoms were accordingly those of interference with transmission of sensory impressions, rather than the origination of voluntary movements.

In conclusion, it may be of use to point out that, owing to obscurity of symptoms in the early stages, the cases of grave brain disease (see cases 4, 5, and 6) were diagnosed as hysteria, dyspepsia, and chorea, before their admission into the infirmary. It is also noteworthy that in all the cases, with doubtful exception of No. 6, the growth originated in the white matter.

SEWAGE DISPOSAL IN FORFAR.*

By WILLIAM F. MURRAY, M.D., F.R.C.S.,

MEDICAL OFFICER OF HEALTH.

FORFAR, a town of about 15,000 inhabitants, by reason of its situation, almost in the centre of the basin of the great Valley of Strathmore, has met with exceptional difficulty in the disposal of its sewage. To the east of the town the

* Paper read at Glasgow meeting, British Medical Association, August, 1888.

ground rises till it reaches the village of Lunanhead, about a mile distant, when it gradually falls, and a spring gives origin to the river Lunan, which, after flowing eastwards through the Lochs of Rescobie and Balgavies, falls into the German Ocean at Lunan Bay. Immediately adjoining the town, on the west, is the Loch of Forfar, about a mile in length. From this rises the river Dean, which flows westward and falls into the Tay. The rising ground to the east of the town thus forms the watershed of the Valley of Strathmore. The origin of the town is lost in the mists of antiquity. Probably it had once been inhabited by the ancient lake dwellers, as stone implements and aboriginal canoes have been frequently found in the vicinity. One thing at least is certain, that it was a place of considerable importance in the time of Malcolm Canmore, who held his first parliament in one of its castles, so that for nearly 1000 years the sewage of Forfar has been drained into the Loch, without any appreciable effect on the health of the community, the death rate comparing favourably with that of any town of its size in Scotland. The death rate of the two years immediately preceding the introduction of our present sewage scheme, namely 1877 and 1878, was 16.5 and 17.2 per 1000 respectively. How such an apparent healthiness could exist amidst conditions which generally produce insanitary surrounding, I think may partly be accounted for by the peculiar situation of the town. It is built on a series of gravelly ridges, sloping to the Loch, with large open spaces, used as gardens, on each side of the street, the town covering a large area for the number of its population. The soil is a light loam, with an open sub-soil of porous sand and gravel, admirably adapted for a filtration medium, and capable of taking in a large quantity of sewage without saturation. In the hollows between the ridges, to which the garden ground gently sloped, small streams ran to the Loch, forming a natural drainage system. Fifty years ago there were no underground drains in Forfar, and the rainfall and sewage ran along surface drains to the outlets, which were only covered at certain places, the sewage being freely exposed to air and light. The sewage, however, contained little or no human excreta, the privy and midden-pit system being almost universal. The population, prior to 1850, was generally handloom weavers, with plenty of spare time on their hands, and the manure thus collected, was either stored to be used in the gardens, or removed periodically by farmers in the neighbourhood. Before falling into the Loch, the outlets were carried by a system of surface irrigation through the bog-lands at the lowest level. A considerable portion of the sewage mixing with the flow from two large springs, fell into the "Bay," a deep pool separated from the Loch by a bank of reeds and rushes, forming a natural screen and settling pond. This primitive way of sewage disposal may be described as a species of downward intermittent, filtration, combined with surface irrigation, no doubt in a rude way and not free from danger, but certainly more economical than the present system. The sewage thus purified by surface irrigation, and settling, had apparently no bad effect on the fish, which, in my younger days, were often caught close to the outlets. Besides the two springs mentioned, the Loch has no stream running into it, but a considerable stream, the Dean, runs out of its western end. The Loch is more than a mile in length, about $\frac{3}{4}$ of a mile at its broadest part, and over thirty feet deep in some places. This large body of water is fed by innumerable springs in the bottom, which even dry seasons, like last year, have very little effect on. Prior to the introduction of a gravitation supply a few years ago, the water supply of the town was from deep wells into

springs, where in some cases the flow was so copious as to resemble underground stream, which probably found their way to the bottom of the Loch. The wells were generally placed on the ridges, and thus the danger from pollution was not so great with the surface drainage, as it was when the first underground drains were put in about 30 years ago. About that time hand loom weaving was superseded by the introduction of steam loom factories, and since then the Loch has been getting gradually more polluted by the sewage and the refuse of the manufactories and bleach works. The spent bleach of from 15 to 16 tons of chloride of lime, the average weekly aggregate consumption of the bleach works in town, was thrown into the sewers. This, no doubt acted beneficially in disinfecting the sewers, and largely contributed to the general healthiness of the town. The large increase of the sewage, and refuse of the manufactories, however, was gradually silting up the "Bay," and threatening to produce a nuisance, and in 1871 a deputation of gentlemen urged on the Commissioners the necessity of disposing of their sewage in some other manner. Mr. Willet, C.E., Aberdeen, was employed to report on the sewage outlets of Forfar, which he did in an able manner, but nothing was done till 1877. The immense volumes of water pumped by the deep wells of the factories soon began to tell on the water supply of the town, which in dry seasons become very scarce in the higher parts. This scarcity increased so much that Mr. Bateman of London was called on, and his plan for the introduction of a gravitation supply from the Den of Ogil, about 8 miles distant, was adopted. Seeing that the introduction of such a supply would of a necessity greatly increase the quantity of water-closet and other sewage, and thereby pollute the Loch, the Earl of Strathmore at once raised an action of interdict in the Court of Session, and the Sanitary Authority was compelled to adopt some other method of disposing of its sewage. Mr. Willet was employed to effect the sewerage of the town, and Messrs. Bailey, Denton, & Co., of London, were called in to advise as to the disposal of the sewage, which resulted in the present scheme.

Mr. Willet pointed out in his exhaustive report that the only sewage outlet of Forfar was to the west. On taking levels he found that the sill of the Castle-street sewer at its outlet was only 1 foot 7 inches higher than the low level outfall of the Loch, about $1\frac{3}{4}$ miles distant, and that at flood there was scarcely any fall, and also that there was scarcely any discernable fall on the river Dean, 4 miles from the outlet of the Castle-street sewer. Thus he was of opinion that, whatever scheme for purifying the sewage might ultimately be adopted, pumping at some stage at the operations was unavoidable. At first it was proposed to apply the scheme to the farm of Whitewell, which is the property of the town, but the adjoining small estate of Orchard Bank, consisting of about 40 acres was purchased, as it was nearer, and the soil was considered more suitable for filtration. Mr. Willet superintended the sewerage of the town, and an outfall sewer nearly a mile in length is carried along the side of the Loch till opposite Orchard Bank, where it falls into two screening tanks, communicating with a well from which the sewage is pumped. The outfall sewer, which is 2 feet in diameter at its outlet, is capable of delivering two million gallons of sewage per diem, and has overflow weirs to relieve the pressure of exceptionally heavy rain storms. The sewage is lifted 50 feet to the sewage farm by three 10-horse power horizontal condensing engines, capable of raising from 45,000 to 50,000 gallons per hour. When the sewage is at the top of the bank, Bailey Denton's scheme for purifying

commences. (Pumping is not absolutely necessary to this scheme, as it can be applied to any place where the fall is sufficient to allow the sewage to run by natural gravitation, pumping being only required in places situated like Forfar, where the sewage must be raised before it can be got rid of by any method.)

The following is a description of the scheme as applied to Forfar quoted from Bailey Denton's work, "Ten Years' Experience of Sewage Farming," published in 1880. The same description still applies with the exception that 7 acres have been added to the number for surface irrigation.—"The quantity of land prepared at Forfar to receive and cleanse the present sewage is confined to about 24 acres, only out of the 40 acres, and the mode of treatment adopted is intermittent downward filtration, combined with surface irrigation. The area of the land devoted to intermittent filtration is 7 acres, leaving 17 acres for surface irrigation. The soil is of a free and open character, sandy and gravelly in parts, though occasionally partaking of a somewhat loamy character. The land may be described as admirably suited for the filtration of sewage, but in order to avoid all chance of supersaturation, a main under-drain, with subordinate drains, has been laid, which will keep down the subsoil water, and secure aëration, and so allow of perfect percolation of the liquid distributed over the surface of the ground. The filtration areas are laid out in series of terraces, each terrace being on a perfect level, to be intersected by main furrows, traversing their whole length, with branch furrows cut at right angles to the main ones. The main furrows are deeper than the branch furrows, in order that they may receive the solid matter floating in the sewage, which will deposit itself in them, and allow the liquid to be distributed by the branch furrows evenly through the soil. The intermediate ground between furrow and furrow is planted with vegetables, the roots of which help themselves to what they require of the sewage, and will yield abundant crops. The terraces forming the filtration areas, and delivery of the sewage to them, are so arranged that each terrace can receive its quantum of sewage separately from the rest, or two or three can be served at the same time, according to the quantity of sewage to be disposed of. After they have received their fill, the sewage will be turned on to other terraces, which in their turn receive their quantum. By this means that intermittency of application and consequent aëration, upon which the oxidation of the putrescible ingredients of sewage depends, will be effected. The fields laid out for wide irrigation are prepared very differently from the filtration areas, inasmuch as the sewage is distributed over them on the 'catch water' system, without any great alteration of the surface configuration. The distributing carriers follow the natural contour of the land. When filled, the sewage overflows their edge, and runs down the natural slope of the land towards the next carrier, which is again filled to overflowing. The whole will be under the charge of the 'waterman' who controls and distributes the sewage in suitable quantities by means of 'stops,' which he places in the carriers, when required to check the flow." Our Superintendent informs me that his general rotation on the surface irrigated land is two years' grass and two years' turnips, with occasionally a piece of barley and oats. The crops in the filtration areas are generally cabbages, carrots, mangolds, and yellow and Swedish turnips. He tells me that in the winter time the most severe frost never interferes with the absorption of the sewage in the filtration areas, and that without them in severe winters he could not make away with the sewage, which would

pass over the frost bound surface of the irrigated grass land almost unchanged. This accords with the experience of other places where the temperature of the sewage was found to have been eight to ten degrees warmer than the air. I have never taken the temperature of the sewage in the winter time, but it must be considerably higher than that of ordinary sewage, as it is constantly mixed with the waste hot water of the factories. The temperature of the pond below the outlet one day last week was ninety when the thermometer in the air was sixty-six. The body of sewage in the furrows thus tends to keep the soil open. In the winter, therefore, the filtration areas receive almost the whole of the sewage. In summer the grass receives as much as it can take, and the remainder is applied to the filtration areas.

Within the limits of this paper it is not possible for me, neither do I think it necessary, to review all the various processes of sewage disposal. My object was merely to give a sanitary history of Forfar, before the introduction of the present scheme, a short description of that scheme as applied, and how it has succeeded.

The chief points, therefore, remaining to be considered are—(1) is it a financial success? and (2) is it satisfactory from a public health point of view? First, as to its financial results. The question, for towns situated like Forfar, is not how they may make a profit out of their sewage, but how they can get rid of it, at the least possible cost to the rate-payers and at the same time in the most satisfactory manner for the public health, and I think our present scheme has successfully fulfilled both those objects. On the 18th October, 1880, Mr. Whyte, Convener of the Water and Sewage Committee, after more than twelve months' experience handed in a detailed report to the Police Commissioners of the income and expense of working the sewage farm, which report was published in Bailey Denton's Book. The following is an abstract:—

INCOME.		£	s.	d.	£	s.	d.
Value of crops, with rent of farm-house, and	land not sewaged	..	..	..	442	5	8
EXPENDITURE.							
4 per cent. for the 4,000 paid for Orchard Bank..	160	0	0				
4 per cent. on £1,500, cost of laying out farm ..	460	0	0				
Expense of working (probable cost) ..	150	0	0				
					370	0	0
Shewing a balance of					£72	5	8

At the same meeting a resolution signed by John Lowson, Jun., Provost of the Burgh, was forwarded to the engineers, expressing entire satisfaction with the work and its results. This apparently favourable report is misleading in some of its items. In the first place the estate was purchased at a fancy price, when the value of land was high. After deducting £30 per annum the then rental of the farm-house (it is now only £19 10s.), the rental of the land is put at £130 or £3 5s. per acre. This is far too high, for the son of the man who was tenant when the purchase was made tells me that his father never paid more than £2 per acre for it, and this at a time when rents were high, and better prices given for the produce. Better land in the immediate neighbourhood is now let at £2 per acre, and competent authorities inform me that £1 10s. per acre would now be considered an extreme rent for the land of Orchard Bank. The probable expense of working the farm is put down at £150. This at the time could not be correctly ascertained, and I believe is much understated. The working expenses, seed, lime, &c., have been over £200 every year since, and wages have fallen much since that time. The item of

feu-duty, taxes, and insurance is also omitted. In my opinion a fairer way would be to compare it with any other agricultural venture; namely to deduct a full rental such as £1 10s. per acre, the working expenses, with feu duty, taxes, and insurance, and the interest at 4 per cent. on the £1,500 spent on the preparation of the farm, from the gross annual receipts. After doing so, I find from figures supplied me by the Superintendent, that the income and expenditure, from 15th May, 1887, to May, 1888, would be as follows:—

		INCOME.		£ s. d.		£ s. d.	
Gross income from farm, including rent of farm-house				432	19	11	
EXPENDITURE.							
Total expense of working farm, feu duty, taxes, and insurance				230	5	1	
Rental of 40 acres—£1 10s. per acre				60	0	0	
Interest on £1,500 at 4 per cent.				60	0	0	
				350	5	0	
Leaving a surplus of				£82	14	10	

The average annual surplus for the six previous years, calculated on the basis, is £62 2s. 4d. This is, I think, a more satisfactory result than we could have got from any of the various chemical or other processes. The products do not fluctuate so much in value, and the Commissioners are not put to the trouble of acting as manure merchants on a small scale. Here let me explain that full advantage has not as yet been taken of the whole of the works, which can in future be extended to the town's farm of Whitewells, adjoining, at comparatively little expense. The Superintendent is at present recommending the Commissioners to take in fifteen acres of it for surface irrigation and five acres of bog-land for osier-beds, from which he is confident he will get a good return.

The second question—is it satisfactory from a public health point of view?—I think can without any hesitation be answered in the affirmative. The general health of the town, judged by the death rate, is very good. The death rate for the past two years was 14.2 and 15.4 respectively, a sanitary record which has seldom or ever been beaten by manufacturing towns of a like size. The sewage has been prevented from flowing in open courses through the bog lands immediately adjoining the town, which in the summer time was becoming a dangerous nuisance. There is now no danger of the "Bay" being silted up with sewage, and the Loch thus becoming a gigantic cesspool. The outlet is now removed about a mile from town, and no nuisance is created by the application of the sewage to the land. The effluents appear to be satisfactory, clear and free from smell, though unfortunately I have no analysis of them. Three families reside on the farm, and in no instance has disease been traceable to the operations, nor any complaints made of disagreeable effluvia arising therefrom. The superintendent's house, and the old farm-house, are situated almost in the middle of the farm, and so freely exposed on all sides to any emanations, which might be expected to arise. The house of the engineman is more immediately in contact with the raw sewage, being only about fifteen yards from the pumping well, and fifty yards from the ponds, in neither of which disinfectants are used. I have always been medical attendant of the engineman's family, who have been exceptionally healthy, and I never attended them for illness, which could be attributed to the sewage.

For the above reasons I am of opinion that under our peculiar circumstances, the scheme is the best we could

have adopted, so far as our present knowledge extends, both on financial and public health grounds. Sanitary science, however, is making rapid strides of late years, and it will not surprise me to find that in a short time a more satisfactory one may supplant it. Since the above was in type I have received the following letter from Dr. A. P. Aitken, Edinburgh, Chemist to the Highland and Agricultural Society of Scotland:—

CHEMICAL LABORATORY,
8, CLYDE STREET,
EDINBURGH, 24TH JULY, 1888.

Analysis of Samples of Water from Forfar Sewage Works, taken July, 1886.

		Natural Sewage.	Sewage after passing through area.
Solids dissolved,	Grains per Gallon,	37.5	36.5
Chlorine,	" "	5.2	3.7
Free Ammonia,	Parts per Million,	69.0	0.12
Albuminoid Ammonia,	" "	2.5	0.78
Suspended Matter,	{ Organic, } qrs. per	21.0	None.
	{ Inorganic, } gallon.	23.5	None.
Nitrate,	Nitrate of Soda,	None.	9.6

WILLIAM F. MURRAY, ESQ., M.D.,
East High Street, Forfar.

DEAR SIR,

I am sorry that I have been unable until now to send you the details you wished regarding Forfar Sewage, and effluent.

The information comes now too late to be of service to you in your lecture, but you are welcome to make use of it in any way.

I regard the above results as a remarkable example of the excellence of the intermittent downward filtration method, when carried out under favourable conditions, as at Forfar.

I have made an inspection of various towns in England, where sewage disposal has been carried out on various systems. The efforts being made by some towns are most praiseworthy, and the results in some instances very satisfactory, but I have seen no place where the sewage disposal is so well settled as at Forfar. I think that Corporations who have the sewage difficulty to face, should make a careful inspection of Forfar works.—Yours truly,

A. P. AITKEN.

As a sort of epilogue, I may mention that during my investigations, I was struck with the immunity from disease in persons living constantly in what we generally consider a hotbed of infection. When we know that the ponds must at times be swarming with myriads of bacteria, bacilli, and other germs of disease, which apparently have no bad effect on the health of persons living constantly so near them, we are almost tempted to agree with the late eminent Forfarian, Lord Neaves, who thought too much was made of them. In some humorous verses published about twenty years ago, he thus satirised the opinions of Tyndal on Dust and Disease:—

Around us, above us, on all sides they float,
They light on our skin, and they slide down our throat
Though we don't feel or see them, yet go where we please,
The atmosphere's laden with Dust and Disease.
Some attacks on the lungs, that of woe would be full,
Are repelled by a filter of loose cotton wool;
But a barrier of brass, or a chevaux-de-frise,
Won't exclude some descriptions of Dust and Disease.
How long will these poison-germs stifle the day?
When will truth's blessed light shed a purified ray?
When will Phœbus send heat, or Favonius a breeze,
To destroy and disperse all this Dust and Disease.
For Bacteria, Vibrios, Schizomycetes,
Microzymes, and Bacilli, infest all our streets.
They're within us, without us, and everywhere,
They poison sea breeze, and the pure mountain air,
They poison our food, and they poison our drink,
How we poor mortals live, is a wonder, I think.

To-day germiphobia is rampant, but, let us hope, that the day of the germicides is not far distant,

THE CORONER'S COURT FROM THE MEDICAL STANDPOINT.¹

PART II.

By JOHN EATON, M.D.

(Continued from page 347.)

THE present mode of election of coroners, as we have seen, is undignified and inefficient, besides being costly and absurd.² The duties of the office, according to the Statute de Officio Coronatoris, are too multifarious and desultory. Though his functions in reference to inquiries regarding rape, housebreaking, prison-breaking, arson, are now in abeyance, as they also are in reference to wrecks, sturgeons, and whales, but not to treasure trove. With regard to arson, where lives are lost through fires, it has been thought that it would have been well if coroners had yet had jurisdiction.—[Soc. Sci. Cong. 1879.]³

The duties of pronouncing outlawry, and of executing process for the sheriff, would doubtless be better in other hands. The opinion is now pretty universal that the exclusive duty of a coroner should be to determine the cause of death, and that inquests ought to be held in the case of all deaths uncertified by a registered medical practitioner, as well as in all obscure, doubtful, or suspicious deaths; in deaths from accident in mines, on railways, or elsewhere; in judicial deaths, deaths in prison; in deaths occurring in asylums, or licensed houses, or in houses registered under the Infant Life Protection Act, 1872, where certain forms of law have not been complied with. That all unnecessary inquests ought to be avoided; that some uniformity of system in the holding of inquests throughout the country ought to be adopted (*B.M.J.*, vol. i., 1875, p. 352). In eighteen large towns in England the percentage of inquests to total deaths during 1874 ranged from 3.3 and 3.6 in Bradford and Hull, to 7.2, 7.6 and 7.9 respectively in London, Birmingham, and Manchester, the average being 6.3; while for the whole of England and Wales it was rather more than five per cent. From the *B.M.J.*, vol. i., 1886, p. 1043, we note that the inquests in England and Wales during 1884 were 28,603. Of these 5,369 were on infants under one year; in 334 cases the verdict was "injuries, cause unknown;" in 2,664 cases "found dead" was recorded; and 10,901 are headed "from other causes." Thus 13,899 were totally unsatisfactory; and the other 14,704 were accounted for thus: murder, 192; manslaughter, 154; justifiable, homicide, four; suicide, 2,019; accidental death, 11,544.

There can be no doubt that the inquests held in the above 13,899 cases, during 1884, were a sheer waste of public money. The assistance of the average jury, with the view of the body which is usually taken, and their consideration of the evidence in any case really requiring investigation, is simply a farce; and for the jury themselves it can honestly be said that it is highly unfair to call so many men away from business to perform such a perfunctory duty without remuneration, when the real work neces-

sary can be so much better done without calling them at all. The holding of inquests at public houses is highly improper (*B.M.J.*, vol. ii., 1876, p. 593), and wherever possible should be avoided.

Mr. Herschel, Q.C., President of Jurisprudence Section of the Social Science Congress, held at Liverpool in 1876, made a few important proposals:—(1) That coroners should be chosen by the Home Secretary; (2) that he should be a legal practitioner, guided by a medical assessor; (3) that the jury should be altogether abolished; (4) and that in every county or borough one or more persons should be selected, specially qualified by training, skill, and experience, to investigate obscure cases.

During March, 1880, an important meeting of medical men was held, Dr. Hardwicke in the chair, when resolutions to the following effect were passed:—1. "That coroners should have the power to accept the services of a skilled medical man, when the one called in does not wish to act, the latter paying the former." 2. "That when the medical attendant declines to give a death certificate, the friends should be referred to the registrar, and the medical attendant should write direct to the coroner, the letter to be private." 3. "That no registrar should be allowed to order a burial, except on the medical attendant's or coroner's certificate."

In the *B.M.J.*, vol. i., 1879, p. 436, there is recorded a most important discussion, which occurred at a meeting of the Health Department of the Social Science Association, on a paper on the "Coroners' Bill," read by Mr. W. H. Michael, Q.C. Mr. Michael expressed a distinct preference for the Scotch system, in which the procurator fiscal, a lawyer, makes the necessary inquiries. Mr. Powell, Q.C., Mr. Fred Hill, Mr. Arnold, of Chichester, and others, emphasized the desirability of the judicial mind of the lawyer as the president of the Coroner's Court. Mr. Cornelius Ward objected to medical coroners, alleging that their verdicts had affected the interests of insurance companies by not disclosing faults of character and action, as extreme intemperance, etc.; while Dr. Hardwicke alleged that medical certificates from high-class practitioners were less precise than those from the rank and file of the profession. Mr. Ernest Hart, however, said that the present Coroners' Bill was merely a consolidating Bill, and remedied none of the grave defects which everyone admitted to attach to the present state of the law; that medical coroners were at present far less dangerous to the public safety than legal coroners, for no adequate provision for independent medical evidence on both sides, or adequate expert evidence, were at present provided by the law of the Coroner's Court (*B.M.J.*, vol. ii., 1876, p. 115).

Mr. Serjeant Cox has suggested that in all cases of sudden death the medical officer of health of the district should be empowered to make inquiries; and if he has any doubt of the cause of death, he should give notice to the coroner to hold an inquest—the health officer to be paid for these extra duties, and a coroner not to hold any inquest till after consultation with the medical officer of health. He holds that thus four-fifths of the present needless inquests would be avoided; and he suggests also that juries should be restricted to five. It has also been suggested (*B.M.J.*, June 22nd, 1876, p. 115) that examining boards should be instituted to test the qualifications of men desirous of obtaining the office of coroner; that the examinations ought to be competitive, the marks attained being noted, so that they might be taken into account, as vacancies occurred in coronerships; and that the examina-

¹ Read before the West Cumberland Medical Society, at Whitehaven, July 27th, 1887.

² By the Local Government Bill, 1888, however, the appointment of Coroners is now vested in the new County Councils about to be formed, and until their formation such appointments are vested in Quarter Sessions.

³ The Coroners' Act, 1888, re-enacts that a coroner may inquire into the cause of any fire occurring within his jurisdiction, when requested by the Metropolitan Board of Works, the Council of a borough, or by a J.P. for the county in which the fire has occurred in their respective districts.

tion should include some law—for example, the law of evidence—in addition to the special law of the Coroner's Court (vol. i., 1878, p. 174).

Sir Douglas McLagan believes in the lawyer on the bench, and the doctor in the witness-box—the doctor to be the coroner's instructor (*B.M.J.*, vol. ii., 1878, pp. 236, 244). He also prefers the Scotch system, and that procurator fiscals should all have to pass an examination in forensic medicine, and that the registers of death should be examined every week by a medical man, to see that no suspicious deaths are registered. It is interesting to note here a particular or two regarding the Coroners' Bill of 1879. When it was introduced, clause 19 provided that legally qualified medical practitioners of not less than five years' standing, in common with barristers or solicitors of similar standing, were considered eligible for the office of coroner; but in the Bill as amended by the Select Committee, medical men were disqualified from holding the office. The legal profession appear to consider the office of coroner one of their legal and vested rights, though some of them have peculiar notions of the duties of coroners. In 1875 (vol. ii., 1875, p. 288), a lawyer wrote to the *British Medical Journal* that the coroner's duty is not so much to ascertain the cause of death as to ascertain if any be culpable.

According to the "Medical Directory" for 1887, the total number of coroners for counties, boroughs, etc., in England and Wales is 348, and of these only 49 are medical men, while 237 are members of the legal profession, and 62 are miscellaneous. No wonder, therefore, that it sounds something like heresy to suggest that only medical men ought to be employed to do what should be the only duty of a coroner—viz., to ascertain the cause of death. And, doubtless, the powerful interests of the legal profession in and out of Parliament will render it difficult for some time to alter the present state of the Coroner's Court to any important extent. The chief suggestions of the Select Committee in 1879 were: (1) That coroners should be legal practitioners, with the powers of a stipendiary magistrate; and (2) that coroners should nominate one or more competent medical men, to be appointed by the Secretary of State, to act within their districts as assessors, and to give evidence, perform *post-mortem* examinations, etc. (vol. ii., 1879, p. 108).

At a meeting of the Parliamentary Bills Committee (vol. i., 1879, p. 567) in 1879, the late Dr. A. S. Taylor—than whom no one has contributed more to the subject of the reforms necessary to the Coroner's Court—gave the following opinions, with which we conclude this portion of our paper.

1. That the coroner of the future should have to inquire into and report the causes of all deaths suspected to be from violence, or non-natural causes; to make a return of all causes of death to the district registrar; and to report yearly to the Home Secretary the number of inquests held, and the results.

2. That in difficult cases the coroner should have power to summon a jury of five, whose verdict should be unanimous.

3. That if the inquiry raised a charge of murder or manslaughter against any person, the further investigation, the taking of depositions, and the committal for trial should be placed in the hands of a stipendiary, or other magistrate or magistrates.

4. That coroners should be paid by salary, and on no account by fees for each case.

And he thought that, by a proper arrangement like this, the inquests would be reduced one-half, or, according to Mr. Serjeant Cox, four-fifths, and that the unseemly contentions between coroners and magistrates would be avoided.

The question as to whether the coroner of the future is to be a legal or a medical practitioner is one of primary importance in reference to all other steps that may be taken to reform the Coroner's Court. And as the former have hitherto, in our opinion, been too frequently appointed, while the latter have been unjustly ignored—there being even at present in England and Wales seven legal to one medical coroner—I venture to adduce a few reasons for restricting the office in future to members of the medical profession. The safety of society and the satisfaction of the public, will always necessitate the employment of some official to inquire into the cause of obscure, suspicious, and accidental deaths; and the modern free use of anodynes, and extended knowledge amongst the people of subtle poisons, are rendering the task increasingly difficult. Legal coroners, like magistrates, are, by their education, destitute of special medical knowledge, and incompetent to form an opinion on the great majority of medico-legal questions. They cannot know enough to enable them to determine the cause of death in any intricate case, or even to appreciate accurately the value of medical evidence as to the cause of death. Neither can they judge when cases are such as to demand inquiry, nor can they efficiently cross-examine a medical witness, for example, in cases of abortion, infanticide, poisoning, or wounds. They are, in fact, dependent on the evidence of the medical witness who happens to have been summoned, and such a witness, if unscrupulous or ignorant, by giving his evidence in a positive or confident manner, might easily mislead a legal coroner, and thus, a false charge being made, an innocent person might be incarcerated until the case came on for trial at the Assizes. In the *B. M. J.*, vol. ii., 1880, p. 36, it is reported that at Abergele, on Friday, June 25th, 1880, Dr. Pearce held an inquest on a quantity of human bones; he pointed out that they were the bones of three persons of different ages, and that they had been used for scientific purposes. . . . It is obvious that a legal coroner would not have been able to explain them, and could only have recorded the opinion of a medical man regarding them. Experience has proved that ordinary medical men are competent to master all the law necessary (even in the somewhat undefined present state of the law of the Coroner's Court) to enable them to put questions in a proper legal form, to take, record, and weigh evidence, and to conduct the business of the Court with all due dignity and efficiency. And this would be accomplished even more easily if the law on the subject was more clearly defined and simplified, and the duty of the coroner clearly restricted to an inquiry into the cause of death.

If at present any slight informality does occur in the proceedings of the court, the result is comparatively immaterial, for in all cases involving a criminal charge the whole case is re-investigated by a magistrate or magistrates, and it is their decision that commits the prisoner for trial to the Assizes. On the other hand none but medical coroners are in a position to understand the circumstances attending or contributing to an obscure or suspicious death, or to estimate scientific evidence on such a subject, or even to judge correctly when an inquest is really necessary. Skilled medical knowledge is obviously much more necessary than that of law to a coroner. Mr. W. H. Michael,

Q.C. (*B. M. J.*, vol. i., 1878, p. 31), has stated that in 80 per cent. of the deaths that occur medical is more important than legal knowledge in ascertaining the cause; and medical coroners, by avoiding unnecessary inquests, are doubtless most economical and most efficient. Some have thought that to appoint special medical officers to make *post-mortem* examinations was equivalent to a reflection on the honour, intelligence, and independence of the profession, but while the medical profession is fitted by status and attainments to take a prominent place in all matters of social improvement and well being there can be no doubt that the proper person for the office of coroner is a specially trained and experienced medical practitioner.

From the consideration of the whole subject in the preceding papers, the chief desirable reforms in the office of coroner, and in the coroner's court may, I think, be briefly summarized thus: 1. That in future only duly qualified medical practitioners of a certain standing should be eligible for the office of coroner, and that the duties should be restricted to an inquiry into the cause of death; and that when anyone is suspected to be culpable, and the question of manslaughter or murder arises, the case should, without a verdict being given by the coroner's jury, be sent for trial to the Assizes. 2. That candidates for the office of coroner should not only be duly qualified and registered medical practitioners, but also have passed a special examination in forensic medicine, practical pathology, and analytical chemistry, and in the law of evidence and the law of the Coroner's Court. That medical officers of health of ten years' experience, or diplomates in public health, on passing a modified examination, should be eligible for the office of coroner. 3. That the examiners of candidates for the office of coroner should be, say, five in number—*viz.*, two lawyers and three medical men. The marks attained at the examination to be recorded on the certificate of qualification, so that they may be taken into account in the allotment of appointments. 4. That the appointment should vest in the President of the Medical Council, or the President of the Royal College of Physicians, or the President of the Royal College of Surgeons, or like that of our judges, in the Lord Chancellor, or in a combination of these officials. 5. That all other classes of coroners should be abolished, and all the previous law on the subject superseded. And that the areas of jurisdiction should be so arranged as to yield salaries of not less than £800 per annum, and sufficient with allowances to enable the coroner to dispense with private practice, from which he ought to be debarred. 6. That the future coroner should not have to pay the current expenses of his court, but that all fees connected with it should be paid by the County Court clerk, at or immediately after the inquest, through the summoning officer. 7. Future coroners not to have deputies; and when the coroner of a district is unable to act, the coroner of an adjoining district to act for him, a fee not exceeding £2 2s. to be allowed for the work, which the absent coroner must pay. 8. That never fewer than two medical practitioners should be engaged to make a *post-mortem* examination for an inquest, and that the fees and travelling expenses allowed to scientific witnesses at inquests, and courts to which inquisitions may have been referred, should be on a more liberal scale than hitherto, for example:—for (*a*) A private report given to a coroner, to enable him to determine the necessity for an

inquest, say £1 1s. (*b*) For attending an inquest, say £1 1s., and for each adjournment attended, the same fee. (*c*) For each *post-mortem* examination performed, say £2 2s. to each medical witness. (*d*) Surgeons of hospitals or of the public services to be in every case, when they act on a coroner's order, entitled to the same fees as other medical witnesses. (*e*) Travelling expenses allowed to and from the place of inquest or adjourned inquest not to be less than 9d. per mile each way, if the place is more than one mile distant from the residence of the medical witness. (*f*) Not less than £2 2s. per day to be allowed, with first-class travelling expenses, both ways, when attending the assizes as a witness in cases that have been the subject of an inquest by the coroner. (*g*) In all cases of suspected death from poisoning, the most eminent experts should be employed; and where analyses of the stomach, viscera, their contents, and certain internal organs are required, together with perhaps experiments on animals, to elucidate the cause of death, the fee allowed should range from £5 to £50, at the discretion of the Home Secretary, who should even have discretionary power to exceed the latter sum, if he considers the expert entitled to more.

There are doubtless many points which, notwithstanding the length of this paper, have been overlooked, and our summary may also, in some respects, appear to be somewhat crude; but these gleanings from the literature and law of the office of coroner, and of the Coroner's Court, are, as you will have observed, the kernel separated from the husks of a considerable amount of reading on the subject. It was undertaken for the purpose of placing before my own mind the essentials of a subject usually considered to be beyond the range of medical studies, and one which I believed to be of great importance, and a knowledge of which would conduce to the enhancement of the *prestige* of the medical profession. I trust, therefore, that its consideration has proved much more interesting and useful than tedious to the members present. If the reading of this paper succeeds in causing abler pens to advocate the cause—the propriety of securing that the coroners of the future should be specially trained medical men, or at least that in every district medical assessors may be appointed to guide the coroner (or, if coroners are abolished, that the Massachusetts system of investigating obscure deaths may be adopted)—and thus advances the interests of a self-denying, self-forgetful profession, whose claims to consideration have hitherto been too frequently ignored, I need not say how pleased I will be at having happened to undertake the task, nor how much I will rejoice in the results.

THE GENERAL PRACTICAL USES OF ELECTRICITY IN MEDICINE AND SURGERY.

BY W. E. STEAVENSON, M.D., (CANTAB.), M.R.C.P.,

IN CHARGE OF THE ELECTRICAL DEPARTMENT (LATE CASUALTY PHYSICIAN TO)
ST. BARTHOLOMEW'S HOSPITAL; PHYSICIAN TO THE GROSVENOR HOSPITAL
FOR WOMEN AND CHILDREN.

(Continued from page 295).

THE medical application of electricity which has lately excited more interest than any other is its employment in the treatment of uterine fibro-myomata. The great interest shown in this mode of treatment arises from several causes. In the first place, the very inadequate means at our disposal for dealing with these tumours, at the best only palliative, unless the patient likes to submit to a mutilating and dangerous operation; then to the comparative frequency of the affection, and the almost total incapacity for any of

¹ The vesting of the appointment of coroners in the New County Councils about to be formed will doubtless prove a most satisfactory arrangement.

the duties of life to which, in many cases, it reduces the patient; and, perhaps not least, to the rather exaggerated hopes which were raised of the power of electricity for entirely removing these tumours.

It is probable that very few tumours, if any, have disappeared under this treatment, but in most cases the relief of symptoms has been very considerable, more so than by any other mode of treatment that has been adopted. The form of tumour in which most relief has been obtained are those which are accompanied by profuse loss of blood at the ordinary monthly periods and between times, the loss, in fact, being sometimes almost continuous. These cases have, as a rule, been treated by ergot, rest in bed, or by a sojourn at one or other of the spas, the waters of which contain iodine and bromine; or the patient is encouraged to wait, and look forward to the menopause, at which time many of these tumours undergo spontaneous degeneration and re-absorption. The treatment by electricity is an expensive and tedious process, requiring much patience and perseverance both in the patient and the doctor. The battery required for electrolysis is very different to that employed for galvano-cautery. For electrolysis it is necessary to have a battery of high electro-motive force for the purpose of overcoming the great resistance which is offered by all substances to their chemical decomposition by electricity.

The *electro-motive force* of a cell is the difference of potential between the positive element and the negative, and depends upon the composition of the elements and the nature of the exciting fluid in which they are bathed, and which acts chemically on one or both of them. The difference of potential thus established in the elements of a cell produces electro-motive force, and electro-motive force is that force which tends to move electricity in a circuit when the circuit is closed. The *volt* is the standard of electro-motive force, and is very nearly the electro-motive force produced in one Daniell's cell.

The unit of *resistance* is the *ohm*. An ohm is the amount of resistance offered by $48\frac{1}{2}$ metres of copper wire of one millimetre diameter. Dr. Stone, of St. Thomas's Hospital, has shown¹ that the human body offers a resistance of from 900 to 1,000 ohms. This is when two large surface electrodes are both applied to the skin. If the electrodes are small, the resistance of the body will appear greater; and if one large surface electrode is applied to the skin, and another electrode to some internal mucous membrane, the resistance will be very much less. If both electrodes are introduced beneath the skin, the resistance will be still further diminished. The *ampère* is the unit of *current strength*, and is produced by one volt through the resistance of one ohm. In medicine, $\frac{1}{1,000}$ th part of an ampère or a milliampère is the unit used. The current strength produced by a battery is determined by the accumulated electro-motive force of the cells divided by the resistance. This is what is called *ohm's law*, and is expressed by the following formula:—

$$\text{C.S.} = \frac{\text{E.}}{\text{R.}}$$

The current strength (C.S.) equals the electro-motive force (E), divided by the resistance (R). The resistance (R) opposed to chemical decomposition is very great, and therefore the numerator (E) of the fraction has to be proportionately greater, so that the current of electricity may be of sufficient strength to overcome it. To insure

this, a large number of cells have to be coupled together "in series"—that is, the positive element (zinc) of one cell coupled to the negative element in the next cell, and so on, leaving a negative and positive pole at either end of the series of cells to which to attach the *rheophores*. (The rheophores are the conducting cords leading from the battery to the electrodes.) In this way the electro-motive force of each cell is added to that of the next, and with a large number of cells we thus insure a high current strength. It is therefore necessary to have a battery composed of a large number of cells; and small cells are as efficacious as large ones, as regards their electro-motive force, but they become more quickly *polarised*.

If there is more resistance in the circuit, only a smaller amount of electricity can get round it in the same time, and, therefore, there is less chemical action in the cells. The chemical activity in a cell depends upon the strength of the current of electricity, and the strength of the current depends upon the facility with which it can get round the circuit, *i.e.*, upon the resistance offered to its progress; therefore, if the resistance is great, the chemical activity in the cell is reduced. Beyond a certain limit, large cells (containing large elements) are of no advantage. The internal resistance is so small, as compared with the external resistance, that it may be ignored; but if the external resistance is also very low, then any slight reduction in the internal resistance materially influences the strength of current. A cell composed of certain elements is only capable of a certain electro-motive force, no matter under how favourable circumstances it is placed. The difference of potential produced in each cell of a battery composed of the same elements, when joined "in series," is the same; therefore, if one large cell be interposed among a dozen small ones, the chemical action taking place in it when the circuit is closed will not be greater than that taking place in the other smaller cells.

The requirements of a battery to be used for electrolysis are—that it shall be fairly portable; that the individual cells shall be made of such materials and in such a way as to possess a high electro-motive force; that there shall be some provision when the battery is in action, to prevent as much as possible *polarisation* taking place; and that there shall be some arrangement for bringing the cells consecutively into the circuit without any make or break of the current. *Polarisation* is a term used to designate a condition which is induced, more or less, in all batteries when in action. This condition is the tendency to the formation of a gaseous film on the surface of the elements, produced by the chemical changes that take place in the battery. This film, besides increasing the internal resistance of the cell, produces a slight electro-motive force in the opposite direction to that produced by the battery, and acts in antagonism to it. The more violent the action in the cell—that is, the greater the strength of the current that is passing through it—the more rapidly does this polarisation tend to take place. A film of hydrogen is deposited on the negative element, and a film of oxygen on the positive. The hydrogen is electro-positive to the oxygen, and therefore sets up a backward electro-motive force. To prevent this polarising action, different devices are employed in different cells. One of the commonest in sulphuric acid cells, wherein an excess of hydrogen is liberated on the formation of sulphate of zinc, is to add bi-chromate of potash ($\text{K}_2\text{Cr}_2\text{O}_7$). The oxygen is liberated and forms water with the hydrogen which is displaced.

Many operators prefer to use all the cells of their battery

¹"Lumleian Lectures before the Royal College of Physicians of London" (*British Medical Journal*, vol. i., 1886, pp. 728, 812, 863).

at once for the purpose of lessening the chance of giving a patient shocks by any interruption of the current which might take place when the cells are added one by one to the circuit. The strength of the current is then regulated by a *rheostat*. Another advantage in employing a battery in this way is that all the cells get an equal amount of work. A current is obtained of high electro-motive force, but not of great quantity, so that the action in each individual cell is not very great. When a strong current is obtained from a few cells, those cells perform a relatively greater amount of work, and sooner become exhausted.

Rheostats are made in different ways. They are simply arrangements by which an additional amount of resistance can be introduced into the circuit, and this resistance can be gradually reduced, with the result of a corresponding increase in the current strength. The best form of rheostat is made with bobbins of German silver wire, each bobbin having a known resistance in ohms. By including a greater or less number of these bobbins in the circuit the resistance can be increased or diminished. Another form of rheostat is made by including in the circuit a certain length of badly conducting composition, and an arrangement exists for including a greater or less length of this composition in the circuit. One objection to this form of rheostat is that the actual amount of resistance at any time in the circuit cannot be accurately and readily determined. A third form of rheostat is used, which consists of a column of water enclosed in a glass tube, through the cover of which a metallic rod, connected to the battery, can be raised or lowered so as to approach or recede from a piece of metal at the bottom of the tube, which is in connection with the electrode. The current, therefore, has to traverse the water. The amount of resistance is directly proportionate to the distance of the metal rod from the metallic base of the tube.

An objection to the employment of a rheostat to regulate the current in performing electrolysis is that an additional instrument is introduced, and therefore an additional point at which some difficulty may occur through the instrument not working properly; and a water rheostat offers such a very high resistance that with all the cells of a thirty-cell battery in use we sometimes cannot obtain as high a current as we require, and therefore have to employ batteries of such power and size that they cease to be portable.

The batteries most commonly used in medicine and surgery are:

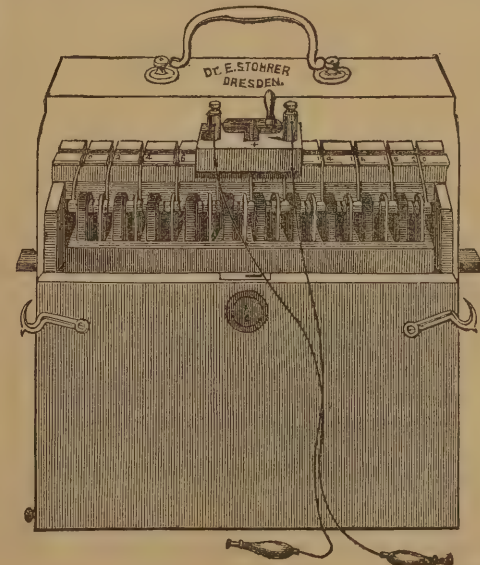
Daniell's	electro-motive force	..	..	1.079 volts.
Smee's	"	"	..	1.62 "
Leclanché's	"	"	..	1.5 "
Chloride of silver	"	"	..	.915 "
Stöhrer's	"	"	..	1.825 "
Grove's	"	"	..	1.956 "
Bunsen's	"	"	..	1.964 "
Bichromate of potash	"	"	..	2.000 "

The Leclanché and Stöhrer batteries are the best for elec-

trolysis. A Stöhrer's battery is composed of "single fluid" cells, and is a modification of the Smee battery. The negative elements of the latter (platinised silver) are replaced by plates of carbon. The elements are immersed in a solution of sulphuric acid and water, and to diminish polarisation some bi-chromate of potash may be added. This form of battery possesses a high electro-motive force; it is fairly constant, and not quickly destroyed by being "short circuited," as is the case with the Leclanché. The fluid, and zinc elements, can be easily replaced when exhausted. The fluid consists of one part of sulphuric acid to ten parts of water, to this one-tenth part of a saturated solution of bichromate of potash may be added. The elements are coupled "in series," that is the zinc of one cell connected with the carbon of the next. The cells are brought into the circuit two at a time by a travelling commutator, which can be pushed along a wooden frame, to which all the elements are attached. The cells, made of glass, which should be about two-thirds filled with the exciting fluid, are arranged in a tray, which can be raised to the elements when it is wished to put the current in motion.

Theoretically, no action ought to take place when the elements are immersed until the circuit is closed; but practically chemical action does take place on account of impurities in the zinc, and if the tray is not lowered after the battery has been used these local circuits destroy its action by consuming the zinc and "killing" the exciting fluid, by reducing it to a solution of sulphate of zinc. This tendency to local action in the cells is lessened by the zinc being *amalgamated*, that is its surface covered over with a layer of mercury. Amalgamated zinc is also more positive than ordinary zinc, and therefore renders it a better source of electricity. Amalgamation is performed by cleaning the surface of the zinc, then dipping it in a solution of sulphuric acid and water (1 in 10), and afterwards pouring over its surface some pure mercury, which is to be well rubbed in with a piece of wood covered with some linen rag until the surface of the zinc has a bright metallic lustre. The zinc is then to be set aside to allow the superfluous mercury to drain off. The zincs of a battery, when constantly in use, should be frequently amalgamated. A small pinch of sulphate of mercury added to each cell will help to preserve the amalgamation.

A Stöhrer's battery, when freshly charged and with newly amalgamated zincs, has an electro-motive force of nearly 2 volts (1.825) per cell. The commutator consists of a cylinder of ebonized wood, the ends of which are covered by metal sheaths, which overlap towards the middle but do not touch one another. These



metal ends are marked respectively + and -, to indicate the poles. The cylinder can be half rotated by a small

handle, and the metal ends are thus alternately made to touch one or other of two side springs which communicate with two side brass rails underneath the travelling platform on which the cylinder is placed. By this means the poles can be reversed. The side brass rails, when the platform is moved, traverse a groove in the frame, to which the elements are attached, and touch successively each pair of thick brass wires that support the elements. These metal rails are long enough to touch two pair of brass element holders at the same time, so that when slid along the groove a fresh pair of brass wires are touched before the previous ones cease to be in contact. By this means the strength of the current can be increased gradually without causing a make and break. It is of great importance to be able to recognise the poles of the battery. It will not do to trust alone to the + and - signs on the commutator. Occasionally when a battery has been sent away for repair, it will be returned with the travelling commutator reversed, and then the signs will indicate the opposite to what is correct. The error can always be rectified by remembering that in each cell the direction of the current is from the zinc to the carbon and outside the battery from the carbon to the zinc. Therefore the zinc, although the positive element, will give the negative pole. By tracing up the brass wire which conducts the current from the zinc to the commutator, the negative pole can always be determined, and if this does not correspond to the sign on the commutator, the commutator should be taken off, turned round, and then replaced. I have often known an accident to occur by the commutator being placed the wrong way, such as the decomposing of the plating on a metal electrode in the urethra, by the positive pole being substituted for the negative, or a large slough produced on the face when destroying a mole, through the negative pole having been used instead of the positive.

There are many other sources of accident in the use of these batteries. The connection of the rheophores to the battery may not be secure, or the rheophores themselves may be imperfect in some part of their length, or where attached to the electrodes. Oxidation may have taken place between the side springs and the cylinder of the commutator, or the side springs may have become bent so as not to touch the commutator. The same may be the case with the side rails underneath the commutator, so that they do not touch each pair of wires bearing the elements, or are not capable of touching two pairs at the same time. The carbons and zincs may not have been properly screwed together. One of the carbons may have been broken in moving the battery, and when the travelling commutator reaches it an interruption of the current will take place, and the patient receive a severe shock. The same would occur if one cell had not received sufficient fluid, or had been left altogether empty. A zinc or carbon may become inserted in an adjoining cell to the right one. Under any of these circumstances a patient may receive an unpleasant and sometimes a dangerous shock. All these faults have been known to occur in batteries; it therefore behoves the operator to examine his battery carefully before using it, and to know where errors may exist and to be capable of rectifying them. The use of a water rheostat will prevent many of these accidents, but it is subject to the objections already mentioned. Leclanché batteries are also used for the treatment of fibroid tumours, but more cells are required on account of their lower electro-motive force and greater internal resistance, and the number of cells has to be gradually increased to keep up the required current

strength on account of the rapid increase of the internal resistance due to polarisation. A Leclanché battery is more portable than Stöhrer's, and therefore can be more easily taken to a patient's house. For those who frequently employ electrolysis and who attempt to keep their own batteries in order, a *Voltmeter* is necessary for the purpose of taking the electro-motive force of the cells. It often happens that a battery, when in use, very rapidly loses its strength, and a battery that has been used for some time will often be found to have deteriorated. It is very annoying after the application of the current to a patient has commenced to find that the battery will not give the required current strength. The knowledge, also, of the electro-motive force of the battery enables us to calculate the resistance offered by the patient. A voltmeter is really a galvanometer possessing coils with a resistance of several thousand ohms, in comparison with which the internal resistance of a battery may be neglected; therefore the current strength sent through it will represent very closely the electro-motive force of the cells of the battery employed, and can be shown on the instrument if it is properly graduated. A voltmeter graduated to show from 1 to 20 volts is the most useful for medical batteries.

The electrodes used for the treatment of uterine fibromata are of several patterns. If it is possible to pass a sound into the uterine cavity, an electrode is used which resembles it in shape. The greater part of its stem is in some way insulated, and a variable length of metal is left unprotected at the end. If the electrode is to be used with the positive pole, the unprotected part is of platinum. If the negative pole is employed, it does not matter of what metal it is composed, as the negative pole does not affect it. The internal electrode used by Dr. Apostoli consists of a rod about a foot long, one half of it composed of platinum, with a blunted end like a probe, to be used when the cervical canal can be reached and is patent, and the other half made of steel with a sharpened point like a trocar for use when necessity arises for puncturing the tumour. When galvano-puncture is resorted to, the negative pole is always employed. Either end of this metal rod can be fitted into a handle so as to allow the opposite end to be used, and the part of the rod outside the uterus is protected by a movable vulcanite or celluloid sheath. The objections to this form of electrode are that the rod is straight and too rigid, and often cannot be passed into the uterine cavity when a more flexible electrode can be introduced. It is also difficult to get the insulating sheath high enough up so as to protect the os and cervical canal.

The electrode devised by the author is much more flexible. It consists of a copper wire, to the end of which about an inch of platinum is attached of the size of an ordinary sound. The wire part is insulated by gum elastic catheter of the same size as the platinum end. The other



end, to which the rheophore is attached, consists of an ordinary Brodie handle, through which the copper wire passes to a binding screw. This form of electrode is much less expensive on account of the smaller amount of platinum used, and it can be introduced into the uterine cavity in

many cases in which it would be impossible to pass the more rigid electrode used by Dr. Apostoli, the cervical canal being perfectly protected by the insulated stem. If galvano-puncture is employed, an electrode can be used very similar to Dr. Apostoli's but possessing a curve like a tent introducer and a smaller sharper point. The external electrode is made of potter's clay, and is prepared by moistening the clay to the consistency of putty and spreading it out about half an inch thick on a piece of tarlatan or net. The dimensions should be about twelve inches by nine. No more convenient electrode has as yet been devised that will adapt itself so closely to the inequalities of an abdomen often enormously distended by a tumour, but the potter's clay electrode has many disadvantages. It is very difficult to keep warm, and therefore often, when first applied, strikes very cold to the patient; its preparation is disagreeable and messy work; and the clay more or less oozes through the meshes of the material on which it is spread, and adheres to the patient's skin and clothes. The patient should be placed in the lithotomy position, and the vagina syringed out with a carbolic acid solution (1 in 80). The abdomen should be sponged over with warm salt and water or a two-and-a-half per cent. solution of chloride of zinc. This helps to reduce the resistance of the skin. The potter's clay electrode should then be placed upon the abdomen, any spot or abrasion of the skin having previously been covered with a small piece of oil-silk or plaster.

The electrodes intended for internal application should be placed by the side of the operator in a porcelain dish containing an antiseptic fluid. The operator having rinsed his hands in an antiseptic solution, should introduce the forefinger of the left hand into the vagina and seek for the os uteri. Should he be able to reach it, the internal electrode is passed along the finger and tilted up so as to make it enter the cervical canal. If possible the internal electrode should always be passed into the cavity of the uterus, but in some cases it is accomplished with great difficulty, and occasionally is altogether impracticable, on account of the uterus being tilted and displaced by the size and weight of the tumour; but every manœuvre should be practised by which a sound can be introduced. The os can sometimes be pulled down by a hook, or pressure on the tumour through the abdominal wall, will so alter the direction of the uterus that an electrode can be passed into the canal. The employment of the more flexible electrode is in these cases a great advantage. With the index finger in the vagina, the end of the electrode, when it reaches the os, can very often be turned so that it enters the aperture.

In the majority of cases the internal electrode should be attached to the negative pole of the battery—for instance, when the tumour is of a dense and fibrous nature, accompanied by dysmenorrhœa, amenorrhœa, or the ordinary pressure and bearing down symptoms due to its size and weight, or when reflex neurotic symptoms predominate. When the tumour is of a soft and more vascular nature and inclined to be associated with menorrhagia, then the internal electrode should be attached to the positive pole on account of its hæmostatic action. Punctures are made into dense hard tumours when it is quite impossible to introduce an electrode through the cervical canal. All the punctures are made from the vagina, and into the most prominent part of the tumour, or into that part which will lead most readily to the uterine cavity, of course taking care that the needle does not injure any neighbouring

parts, such as the bladder or Douglas's pouch, or enter into any large vessel which might be indicated by the presence of pulsation. The punctures should only be about half-an-inch in length, and the channels made may be used for subsequent introductions of the electrode, or fresh punctures may be made from time to time on suitably presenting parts of the tumour.¹ A speculum is not necessary. The needle or trocar is allowed to remain in the puncture for about five minutes, and 100 milliampères is the current strength which most patients can bear.

The application of electrolysis is itself antiseptic, but in order that no precaution may be omitted, it is usual to have the vagina syringed out with some antiseptic solution, both before and after the operation. When it is necessary to perform galvano-puncture, this precaution is perhaps the more desirable. When everything is ready and in position—that is, the potter's clay electrode accurately adapted to the skin of the abdomen, and connected with the positive or negative pole of the battery, according to circumstances; the internal electrode selected and placed in position, and connected with the other pole; and the galvanometer arranged so as to be included in the circuit—the circuit is closed, and the current gradually increased in strength without any break. This can be accomplished by the water rheostat already described, and its resistance can be reduced by adding to the water it contains a few grains of salt. If there is any complaint of pain on the part of the patient, the strength of the current can be gradually reduced, but the patient must be encouraged to bear as strong a current as she can. It will often be found that at the first application a current of more than 70 or 100 milliampères cannot be tolerated. On subsequent occasions the current can be borne stronger, and sometimes reaches as high as 250 or 300 milliampères. Anything over 100 may be considered quite strong enough to obtain results in cases of non-galvano puncture. The time occupied by each application varies from five to eight or ten minutes. The current should be gradually reduced in strength in the same way as it was increased, and the greatest care taken not to produce any shock, which would be the case if the circuit were suddenly broken. It is as well that the patient should remain in bed and quiet for some hours after each application, but a patient may, after an hour or two's rest, walk about if necessary, and on the following day pursue her usual occupation.

The resistance the patient offers to the current varies very much with the condition of the skin at the time of the application, and with the size and moisture of the external electrode. In one case, when a current strength of 140 milliampères was used, and given by ten cells of a Stöher's battery, the resistance was calculated to be about 130 ohms. In another case, with a current strength of 120 milliampères from sixteen cells, the resistance was about 225 ohms. In each case the electromotive force of the battery was taken by a voltmeter immediately before the operation. During the passage of the current the strength increases without the addition of any more cells; this is due to a decrease in the resistance offered by the patient, and is an interesting and not altogether explainable phenomenon in the treatment of fibroid tumours. The number of applications of the current that are necessary will vary with the case. Relief is obtained sometimes with bleeding fibroids after four or five applications, but they usually require eight or ten. Hard, dense, fibroid tumours

¹ Dr. Apostoli's paper, read at Dublin.—*Brit. Med. Jour.*, Oct. 1, 1887.

diminish in size very slowly, and may require as many as thirty applications of intra-uterine electrolysis. It is difficult to fix any exact time at which the applications should be discontinued, as the tumours seldom disappear entirely. When the patient has been relieved of all distressing symptoms, and the tumour is reduced sufficiently in size to cease to be an annoyance through its bulk and weight, the applications may be reasonably stopped, or only had recourse to occasionally, should any symptom return to justify it. The frequency with which the applications should be made is also a matter which depends upon various circumstances—such as the nature of the tumour, convenience, menstruation, the effects produced, and other conditions. In some cases the applications may be made as often as twice a week, or every four days; in others intervals of ten days or a fortnight may be necessary.

The great danger inseparable from abdominal section, and the uselessness of all medicinal treatment for the removal of uterine fibroids, makes this mode of treatment by electrolysis the more acceptable and of greater importance. There are few fibroid tumours which do not cause some inconvenience, and more or less distressing symptoms; in some cases they render life almost intolerable—the ever constant weight and dragging pain; the interference with digestion, defæcation, and sometimes with micturition; the reflex neurotic symptoms and depression; the ever constant ill-health with exacerbations at the ordinary monthly periods, sometimes with downright acute pain or profuse hæmorrhage, which incapacitates the patient for several days or a week; the drain on the vital power produced by this incessant pain and sometimes constant loss of blood, all call for some relief. In electrolysis we have a means of relief, the application of which is not difficult to those who understand the medical and surgical uses of electricity; it is not unduly painful; if properly applied it is practically free from danger. If the tumour is not much reduced in size the distressing symptoms are almost invariably relieved, and the patient's health improved, and she is not in a worse condition for more heroic measures, should they be deemed advisable, than before the application of electricity. The treatment is spread over rather a lengthened period of time, but after the first or second application no enforced confinement to bed is necessary or imposed upon the patient.

I am indebted for the following note on the treatment of fibroid tumours by electrolysis to G. G. Morrice, M.B. Cantab., my late senior assistant in the Electrical Department of St. Bartholomew's Hospital. "To those who are accustomed to the exploits of modern abdominal surgery, the treatment of uterine fibroids by electrolysis may seem a very tame affair. The success of the process depends largely on how the preparations are made beforehand, and the actual application leaves the operator for ten minutes or so in a position of masterly inactivity. Some compensation however is afforded by the many interesting questions which are forced upon his mind by that most valuable instrument—the galvanometer. It is worth while to note its readings at intervals throughout the time. If we assume that Ohm's law may be applied to a complex electrolyte like the human body without introducing any serious error, we shall find that the apparent resistance of the circuit falls rapidly for a certain time and then rises again. No doubt most of the fall is accounted for by the moistening of the skin; we might conjecture that modifications of the state of the circulation through the tissues would occur, and involve corresponding modifications of

the resistance. As regards the subsequent apparent rise, let us record the fact that we have two electrolytes in the circuit—the fluid in the battery, and the tissues of the body. While we know a good deal about the chemical decomposition that goes on in the battery fluid, we know very little about what goes on in the tissues. Whatever they may be, the elements that are separated by the electro-motive force will tend to combine again, since no special provision is made, as in the battery, for their removal. We have therefore a backward electro-motive force due to polarisation in the tissues. It is interesting at the end of an application of electrolysis to a uterine fibroid to detach the battery from the circuit and watch the galvanometer; a reverse current of about twelve milliampères will be observed, which gradually diminishes. Dr. Stone "already had roughly determined that the healthy body had a charging power as a secondary battery of about one volt" (Report of paper read before British Association). It would appear, however, that under the conditions just mentioned, it may be somewhat higher. Thus, in one case operated on in St. Bartholomew's Hospital, the lowest resistance of the circuit was 182 ohms; at the end of ten minutes, with eight cells of a Stöhrer's battery (twelve volts), the current was forty milliampères, giving a resistance of 300 ohms. If we suppose that this apparent increase of resistance is all due to the backward electro-motive force (E), we have:—

$$(12-E)=40 \times 182 \quad E=4.72 \text{ volts.}$$

1000

In thus applying Ohm's law to the tissues of the body, we must remember that we are taking liberties which deprive our results of any claim to strict accuracy. We learn in fact from Dr. Stone's researches that we are dealing with a conductor, condenser, and secondary battery combined."

THE TREATMENT OF FIBROIDS BY ELECTROLYSIS.

By A. W. MAYO ROBSON, F.R.C.S.

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THE subject of the treatment of uterine fibroids by electrolysis is one which at the present time demands the serious attention of the profession, because, by means of a simple process, we are assured, not only by the originator of the treatment, but by other able gynaecologists, that a troublesome and even dangerous disease can be either cured, or so much relieved as to obviate the necessity of what must always be considered a serious operation. Moreover, the fact that there are two opposite schools, the one advocating electrolysis, and asserting its great efficiency, the other positively denying to it any beneficial action, and stating that it is uncertain in its effect and dangerous in its application, renders it imperative that all the cases in which the treatment has been employed should be reported, so that the profession may be in a position to know what to expect of it. Hitherto the reports that have appeared in the journals have been for the most part statements and opinions without detail; and without details it is hard to form a correct judgment. Having carefully read what had been published on the subject, and having had the advantage of seeing Dr. Apostoli operate, I felt it my duty in all cases of uterine myoma coming under my care to give electrolysis a fair trial before resorting to more active

measures. It would be tedious to report all the cases minutely, so that after giving details of two, a brief reference will be made to the others.

Case 1.—Mrs. W—, æt. forty-three, was sent to me by Dr. K—, with the history that she had had three children; the last seventeen years ago. Fourteen years previously she had been told that she had a tumour of the uterus, since which time her abdomen had gradually increased in size, but more especially during the last three years. During the last fourteen years the menses had been very profuse, and of late very excessive; so much so, that besides parting with clots, she required the use of from eighteen to twenty diapers every two or three weeks. Six months previously she said she had been seen separately by a hospital surgeon, who declined to operate on her case, and by a physician who told her she had not long to live.—On January 16th, 1888, when she first saw me, she looked very depressed and extremely anxious; her countenance was pale and waxy in appearance, as if she had very little blood left in her vessels; she was very short of breath, and exhausted with the least exertion. Besides the abdominal pains she suffered from neuralgia in various parts of the body, arms, legs, etc. The pulse was feeble and dicrotic, and a systolic cardiac bruit was present both at the apex and base. On examining the abdomen it was found to be occupied by a large hard tumour, extending as high as the ribs, and passing down into the pelvis. On vaginal examination, the cervix was occupied by several hard round masses, rendering it impossible to localise the os uteri. These masses moved with the abdominal swelling. After a little manipulation the uterine sound was passed between two of the bosses, into what was supposed to be the uterine canal, which measured one inch above the normal length. The passage of the sound gave rise to rather free bleeding.—On January 17th, after previous antiseptic douching with a solution of salufer, twenty grains to the pint, electrolysis was applied, the positive pole being connected with the platinum electrode in the uterus, and the negative with the large clay electrode on the surface of the abdomen; a current of eighty milliampères was passed for five minutes. Although the menstrual period had only passed a few days, this had the effect of bringing on another excessive period of four days.—January 25th electrolysis was again applied, the positive pole being in the uterus; 200 milliampères passed for ten minutes; the tumour seemed less than on the previous visit.—On the 28th a current of 210 milliampères was passed for ten minutes, positive pole in uterus.—January 31st, 200 milliampères passed for ten minutes.—February 4th, 200 milliampères for ten minutes, negative pole in uterus.—February 8th, 200 milliampères, negative in uterus, for ten minutes.—February 15th, 200 milliampères for ten minutes, negative in uterus.—February 20th, the menstrual period came at the month end, and only lasted three days, six diapers only being required; the top of the tumour was only midway between the pubes and umbilicus.—February 24th, 220 milliampères for ten minutes, negative in utero.—February 27th, 240 milliampères for ten minutes, negative in utero; this application was followed by severe abdominal pain, which lasted two days.—March 3rd, 150 milliampères for fifteen minutes.—March 14th, another period had just passed lasting three days, and only requiring six napkins. The tumour had receded from the abdomen to the pelvis, and the abdomen was quite flat; 150 milliampères passed for ten minutes. The following is a copy of a letter received from Dr. K—, dated March 17th:—"I saw Mrs. W—

yesterday, and I consider the result almost marvellous; she rose yesterday morning, lighted the fire, and got the breakfast ready for the rest of the family, who are delighted with the successful result."—On April 10th she returned for another application, and said that the period had just passed at the full month end, and that she only had required to use eight napkins; she expressed herself as feeling better than for many years. On examining the uterus bi-manually, it felt to be about the size of a large orange, the peritoneal surface being covered with round bosses. A current of 240 milliampères passed for ten minutes; negative pole in the uterus.—On May 15th a current of 200 milliampères for ten minutes. The patient had been doing her household duties during the menstrual period, and had had considerable domestic anxiety; she had required to use nine diapers.—On May 30th the vaginal nodules were quite small, and the os uteri could now be defined; no tumour could be felt through the abdominal walls, which were becoming thickened by a deposit of adipose tissue. A current of 150 milliampères passed for seven minutes, the positive pole being in the uterus. The patient was discharged, having lost the abdominal tumour as well as the pains which it caused; with the periods normal in time and quantity, and with a fair colour in her face and lips. In place of being an invalid requiring attention, she was feeling well, and was able to undertake all her household duties.

Case 2.—Julia Handley, æt. forty-six, a hawker, was admitted to the Leeds Infirmary, on September 22nd, 1887, under the care of my colleague, Mr. McGill, who kindly transferred her to me for electrolytic treatment. The patient had had five children, the last ten years. The menses had been regular up to eighteen months before admission, since which time they had been both too frequent and too profuse. She noticed the abdomen to be swollen a year previously, when a hard lump was felt in the hypogastric region; this increased gradually, and then rapidly diminished, afterwards increasing again up to the time of admission. There was no metrorrhagia between the "periods." She had had much pain in the abdomen, almost like labour, the pain being increased by walking. On examination a hard round tumour could be felt rising out of the pelvis, and reaching as high as the umbilicus, measuring nine inches from side to side. The surface of the swelling was smooth, giving a doubtful sense of fluctuation. The tumour was movable from side to side. The circumference of the abdomen from the centre of the tumour was twenty-nine and a half inches. On vaginal examination the tumour and the uterus moved together, and seemed to be one. The uterine sound passed three inches.—On October 11th a current of ninety-five milliampères was passed for five minutes. The patient seemed peculiarly sensitive to the current, and could not bear a greater strength.—On October 15th a current of fifty-five milliampères was passed for ten minutes, the negative pole being in the uterus. Retention of urine followed this application for two days, and the patient complained of great pain in the abdomen. The catheter had to be used.—On October 22nd 130 milliampères passed for eight minutes without much pain; the abdomen felt very flaccid, and the tumour much less than before. The patient said she felt as if something had burst, but there was no evidence of this, and no vaginal discharge.—On October 27th she complained of pain in the abdomen, inability to take food, and a continual feeling of sickness; she vomited several times, but there was no abdominal distension. Menstruation came

on rather freely, but no clots were passed.—On November 5th, "all the untoward symptoms having passed away," a current of eighty-five milliamperes, with positive pole in the uterus, was passed for five minutes, the current being then diminished and reversed, and seventy milliamperes passed, with negative pole in uterus, for ten minutes.—On November 12th a current of fifty milliamperes passed for ten minutes. During the interval of a fortnight, owing to absence of battery for repairs, the tumour had somewhat increased in size.—On November 22nd a current of eighty-five milliamperes was passed for ten minutes. A stronger current could not be borne.—On November 30th a current of 130 milliamperes was passed for seven minutes.—On December 10th a current of sixty milliamperes passed for eight minutes.—On December 14th 150 milliamperes for six minutes.—On December 17th 200 milliamperes for seven minutes. The fibroid felt looser, and was decidedly more movable, but still reached to within one inch of the umbilicus. The pain on applying the current was more marked the nearer the menstrual period.—On December 28th 150 milliamperes for seven minutes.—On January 4th 230 milliamperes for ten minutes.—On January 7th 220 milliamperes for nine minutes.—On January 14th 80 milliamperes for five minutes.—On January 19th the patient was discharged at her own request, as she said she was well, the last menstrual period having passed in a short time, and with much less discharge than for many months. The tumour was smaller, softer and more movable than on admission, and although it reached to within one and a half inches of the umbilicus the abdominal prominence was not perceptible to the eye. The temperature during the treatment had never been above the normal.

Case 3.—Mrs. J—, æt. thirty-five, admitted to the Infirmary on January 23rd, with the history of having been married fifteen years with no children. She had been quite well up to nine months previously, when she began to be troubled with frequent micturition, sometimes having to pass urine every two or three minutes. If the call to micturate was not attended to, retention occurred, and from time to time the catheter had to be used. On admission the bladder was distended to the umbilicus, and thirty-six ounces of healthy urine were drawn off. The pelvis was found to be occupied by a large hard mass growing from the back of the uterus, and completely filling Douglas's pouch. The os uteri was felt high up anteriorly behind the pubes. Even under ether the tumour could not be displaced out of the pelvis, although bimanually it was felt to be somewhat movable. Menstruation was normal, but painful, and lasted only three days.

On February 6th electrolysis was applied, the clay electrode being applied over the sacrum, and connected to the positive pole; the platinum electrode being inserted into the uterus, and connected with the negative pole, a current of 130 milliamperes was passed for five minutes.—February 9th. A current of 130 milliamperes passed for ten minutes.—February 14th. 100 milliamperes passed for five minutes.—February 16th. The fibroid seemed a little smaller, and more freely movable in the pelvis. The patient was anaesthetised, and a sharp platinum sound pushed nearly three quarters of an inch into the hard projection occupying Douglas's pouch. The clay electrode had been applied to the abdomen, and connected with the positive pole; whilst the negative was connected to the platinum electrode in the uterus. Very little oozing of

blood occurred, and on withdrawal of the electrode the vagina was well syringed out with an antiseptic solution. No discomfort or elevation of temperature followed.

Owing to family matters the patient was obliged to leave for home on February 24th. The fibroid was a little smaller, and more freely movable, and the symptoms of pressure were decidedly mitigated, but the tumour was by no means cured. Two letters written to the patient since have failed to elicit a response, probably owing to change of address.

Case 4.—Miss S—, æt. twenty-six, was sent to me on October 17th, 1884, suffering from pelvic symptoms, menorrhagia, frequency of micturition, and pain. General treatment only gave partial relief.—On January 27th, 1885, the uterine sound passed half an inch beyond the normal, and the uterus was found to reach about three inches above the pubes. Each menstrual period extended over ten days. Treatment by ergot and rest was fully carried out, with no benefit, until January, 1887, when the tumour had increased to the level of the umbilicus, and the menorrhagia still continued. Removal of the appendages was advised. On May 16th, 1887, I removed both ovaries and Fallopian tubes. The patient menstruated on the second day after operation. The wound healed by first intention, and the patient was up by the end of the second week. The tumour dwindled, so that on January, 1888, no swelling could be perceived above the pubes; nevertheless, the menstrual periods were almost as profuse as before, eighteen to twenty diapers being required every month.

On January 24th, 1888, electrolysis was applied, the positive pole being in the uterus. The sound passed half an inch beyond the normal. A current of 150 milliamperes was passed for seven minutes.—On January 28th menstruation recurred, and was still excessive.—On February 3rd a current of 120 milliamperes was passed for eight minutes; positive pole in the uterus.—February 13th. 120 milliamperes for eight minutes. Menstruation occurred shortly after the last application, and, although decidedly less than previously, was still excessive. The patient had to go to a distance, and was not again seen by me until May. She was then much better, and had had two menstrual periods, both less profuse than before the treatment by electrolysis. She did not wish to have the electrolytic treatment again, as she said that she suffered from pain, and felt ill for several days after each application.

Besides the above cases, I have treated others with more or less benefit, but to repeat their histories would be tedious and unnecessary. My experience of the treatment of fibroids by electrolysis would lead me to take up a position midway between the two opposing schools, for whilst in some cases the benefit has been so marked as to amount to cure; in others, although the treatment has been as fully carried out, the relief has not been nearly so apparent. I feel that in no case of uterine fibroid, coming under my care, should I feel justified in resorting to operation without first giving the patient the chance of cure or relief by electrolysis; for if the treatment be carefully carried out, according to the rules laid down by Dr. Apostoli, no harm will be likely to accrue, and the patient will not be placed in a worse position for any future operation, should it be deemed necessary.

It remains to be discovered in which cases electrolysis will benefit, and in which it will be likely to fail. This can only be done by a careful record of all cases in which it is tried. I believe, however, that it will be found to be least

beneficial where there is a hard tumour unaccompanied by much loss of blood. In all my cases, whether I have punctured or otherwise, I have tried my utmost to carry out Dr. Apostoli's directions exactly, and have always been careful in syringing out the vagina, both before and after the application, with an antiseptic solution, the instruments and hands being also carefully aseptised. My private patients have come to my rooms, and have either walked or driven away within an hour of the application, some of them going a distance by rail. I have used several batteries, but the one I prefer is a fixed battery, composed of fifty large Leclanche's cells, which are placed in the cellar under my consulting room, the wires being brought up through the floor and attached to a double collector, connected in couples. I use a Gaiffe's galvanometer, and a water rheostat, the electrode being a large plaque of potter's clay for the abdomen, and a platinum sound for the uterus, blunt at one end and sharp at the other. In applying the current I am always guided by the patient's feelings as to the strength to employ, never carrying it beyond easy tolerance. The rheostat most effectually guards against danger of shock.

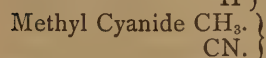
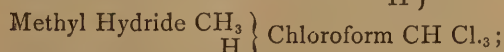
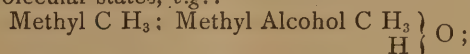
A SKETCH OF AN HYPOTHESIS TOWARDS VITO-CHEMICAL METHODS IN PATHOLOGY AND THERAPEUTICS.

By WILLIAM H. PEARSE, M.D. EDIN.,

SENIOR PHYSICIAN TO THE PLYMOUTH PUBLIC DISPENSARY.

(Continued from page 353.)

AS IT is an *à priori* truth that diseases in their inception are but deviations, in Continuity, of normal process—infinately delicate disturbances of natural prevailing healthy modes of motion and process—it follows that the foundation of pathology and therapeutics must be laid in our discovery of the Laws of the natural evolution of organic products. If we confine our view but to the primary alcohols, we see, *e.g.*, Methyl yields Formic Acid; Ethyl, Acetic Acid; Amyl, Valerianic Acid, etc. Such facts show us the Method of the evolution of the organic, the existence of compounds natural and harmonious to some vegetables and animals, but which may be of inharmonious motions—"poisons"—to the protoplasm of man. Such facts reveal the Continuity of the Methods and processess of the whole organic cosmos; they show that "poisons" are but inharmonious molecular modes, and they show how near to the protoplasm of any animal, is the evolution of such bodies. And these hypothetical inferences apply *à fortiori* to the derivatives of the higher alcohols, and to the albuminoids; for we must not forget such facts, as those of the wondrously different and new powers which bodies show by changes in their composition and molecular states, *e.g.*:



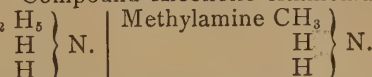
We have also Ethyl Cyanide in Continuity with the molecular modes of the primary alcohols.

We started from the provisional base of sugar and yeast motions, but we could as easily have started from any other phenomena of cell-life; for no single circle of all the cycles of cell-life and their products can be isolated. Each and all the circles of cell-life, both of structure and func-

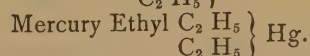
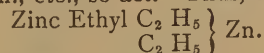
tion, merge. The absolute "specific" no more exists amongst cells than amongst species and genera. Nor, again, can the vito-chemical products of cells, in their motions and properties, be absolutely "specific;" and this truth is well seen in "disease," *e.g.*, scarlet fever and measles overlap in some epidemics; cholera and remittent fever merge; cholera and diarrhoea merge. Cholera is, in fact, a most variable "disease." Under the word "typhoid," cases, and epidemics even, are grouped which are widely different, both as to the course of the symptoms, and as to the pathological changes of structure. Phthisis is a word used to cover an extremely varied set of symptoms and of history. In short, from a large point of view, our best demarked "diseases" are no more fixed than are our best demarked languages.

In tracing the evolution of the infinite variety of the series of the alcohol derivatives, and remembering that alcohol is an early and simpler example of the organic evolution, we have in some degree revealed to us the fulness and depth of organic processes in one of their most simple examples. But the Laws or Forms which we may trace in the alcoholic evolutions must of necessity be a general guide to the method of the more complicated organic products, *e.g.*, the higher fatty acids, the aromatics, the vegeto-alkaloids, the albuminoids, etc. Knowing *à priori* that an Unity of Method must exist throughout the organic, the solving of the alcohol problem would, like the influence of a far-reaching problem in geometry on astronomy, have an application to the further domains of the organic kingdom, both as to its normal evolution, its pathology, and its therapeutics.

The penetrating Continuity of the alcohol series is further seen in the "Compound Alcoholic Ammonias," *e.g.*, in Ethylamine



These bodies have a "strong alkaline reaction and ammoniacal smell, and they combine with H Cl., etc., to form salts" (Roscoe). They show a gradation of complexity of composition in the different number of alcoholic compound-radicals in their molecules. Thus there are *Primary Monamines*, *Secondary Monamines*, and *Tertiary Monamines*, with respectively one, two, and three compound-alcoholic radicals in their molecules. Yet further, these types of bodies exist in which metals have the place of N, *e.g.*, P., As., Hg., Sb., Zn., etc., so act. Thus, there are—



this latter being "a most deadly poison" (Roscoe).

We cannot yet group and classify, under a few great generalisations, the laws and conditions of the evolution of the infinite number of organic products, but we are sure that such general Laws do exist; and, as already stated, the Laws or Forms of prevailing normal evolution will be the basis of pathology, of therapeutics, and of prophylaxis. And all these hypotheses and hopes towards Light in Method appear from a view of the alcohol series.

We cannot but be struck with the existence of compound alcoholic ammonias, and with their powers as poisons, and we cannot fail to see that such, or allied bodies, may arise within the system. Though we may not yet be able to trace the processes, yet we are not at liberty to confine and limit the general continuity of the evolution and series. These alcoholic ammonias have a near cor-

relation to the cyanogen compounds. "The cyanogen compounds may also be considered as derivatives of ammonia. Thus cyanic acid acts in many cases as if it were



and this group becomes connected with the oxalic acid series of bodies. The cyanogen compounds are remarkable for forming series of *polymeric* modifications. Thus we have liquid cyanogen chloride, CN Cl. , and solid cyanogen chloride.

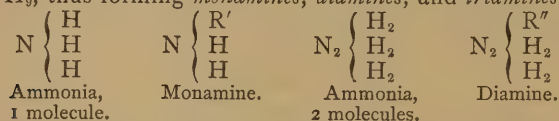
$\text{C}_3 \text{N}_3 \text{Cl}_3$; cyanic acid $\text{CN} \bigg\} \text{O}$, and

Cyanuric acid $\text{C}_3 \text{N}_3 \bigg\} \text{O}_3$. „ (Roscoe).

Nor can we forget the near relation of urea to ammonium cyanate; nor again, that it can be got artificially by the action of ammonia on ethyl carbonate. But if such cyanogen potentialities be derivatives of ammonia, we may *à fortiori* hypotheticate a vast range of new molecular conditions—"poisons"—to be dormant in the numerous and more highly atomic compound alcoholic ammonias—the primary, secondary, and tertiary monamines.

Higher Fatty Acids.—Some of these acids exist in all fatty bodies—*e.g.*, palmitic, stearic. The fatty acids have their primary alcohols; thus Formic Acid is from Methyl, Acetic Acid from Ethyl, Valerianic Acid from Amyl, Pulmitic Acid from Cetyl, etc. . . . "a large number of isomeric compounds exist amongst the acid as well as amongst the alcohol series" (Roscoe). If we say that the evolution of these higher fatty acids, and which are absolute and essential parts of animal life, are from the alcohol series, we must at the same time remember that the alcohol series is not a separate line of action, but that it is most involved and correlated with the cosmic process of the organic: one such correlation we have just been viewing in the potentialities of the compound alcoholic-ammonias and cyanogens. These studies and facts do not yet give any clear and exact knowledge of the value, or otherwise, of alcohol as a drug in any disease.

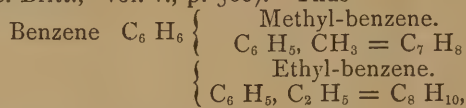
"Amines . . . are derivatives of ammonia or its . . . salts, hydrogen being partially or wholly replaced by hydro-carbon radicals." "Amines built in the type of NH_3 may arise from the replacement of hydrogen in NH_3 , $\text{N}_2 \text{H}_6$, or $\text{N}_3 \text{H}_9$, thus forming *monamines*, *diamines*, and *triamines*.



"Each of these groups of Amines is further divisible into *primary*, *secondary*, and *tertiary*, according as one-third, two-thirds, or all the hydrogen of ammonia is replaced by hydro-carbon radicals" ("Enc. Britt.," vol. v., p. 574). A great series of *primary*, *secondary*, and *tertiary* Amines exist of highly complex constitution. "They combine with Acids, forming crystalline salts, which are decomposed by caustic alkalies with liberation of the Amine" ("Enc. Britt.," vol. v., p. 575). They have the widest correlations—*e.g.*, the derivatives of *Amine Monamines* correlate with *Ethyl Alcohol*; *Methyl Alcohol* being transformable with *Ethalamine*; this, again, into *Ethyl Alcohol*. . . . "*Ethyl Alcohol* can be converted into propylamine, which, by the action of HNO_2 , is converted into *pseudopropyl alcohol*" ("Enc. Britt.," vol. v., p. 575).

Aromatics.—Although in the necessary division of chemical investigation, these bodies are made to form a class,

yet they are truly an evolution or development, in true and absolute continuity with other organic products or states. Many such products are got from the "destructive distillation of coal." They have, thus, an organic origin, and have received the molecular modes of cell-life, and which have persisted through countless ages of time. "Owing to the complex structure of the benzene molecule, an immense number of isomers are capable of existing" ("Enc. Britt.," vol. v., p. 560). Thus



and many others. This vast variety of the Benzene derivatives shows, like the Alcohol series, and with which, indeed, they correlate, a type of Method. It is impossible for us to hold, other than that, different as they may appear, and different as may be their properties and actions, their type and method must be in continuity with the whole processes of the organic vegetable evolution. That the molecular conditions of aromatics should remain existing, in and of their, so-far, primary cell-modes, during the vast ages which have elapsed since the coal formations, reveals to us the fixity of organic molecular conditions. But further, the evolution of this type is still in progress, in a vast range of the vegetable kingdom. The Aromatic bodies have a most powerful influence on living protoplasm; necessarily they, though their molecular motion and energies are modified by digestion, must impart their type or mode of motion to the protoplasm of the animal which assimilates them. The wants and instincts of mankind have, for long ages past, recognized their value as part of their food. In India we see Natives habitually use living aromatics of different plants—*e.g.*, assafoetida, the peppers, coriander, onions, garlic, etc. In various countries garlic and onions are demanded as food. In a large number of those, whose energy of vital evolution is expended or weak, and whose lungs and bronchial mucous membrane thus cease to evolve vigorous cell-growth—the phthisical—there is often a strong craving for onions. The Italian peasant of the Compagna wards off ague by infusion of lemon peel. The Chinese labourer in damp regions, after great river inundations, uses opium to ward off lung disease. Such facts are as orderly, and as absolutely in continuity, as are the facts we group under the words "gravitation," or "conservation of energy." The powers, as a food, and the therapeutic action on protoplasm, of the paleo-aromatics and neo-aromatics, can have no other base than that of their molecular motions. Hundreds of times I have found the pre-phthisical, and phthisical, crave for onions; and on a thousand and one occasions I have found the anæmic Native of India crave for onions, etc. When I find nations, "throughout the ages," using and craving for certain organic products, such as garlic, onions, etc., I am obliged to see, in such phenomena, indications of some great Form or Law; and it appears to me that we are justified in looking for a general law of molecular energy and motion, which shall embrace these facts, and which would open to us wide deductive extension to the fields of disease and therapeutics. I am compelled to hold that Vichy, Kreuznach, Perrière, etc., waters, have a vastly greater influence on protoplasm than have any imitations of them we can make in our laboratories; but the mighty forces or energies, or atomic condensations, which go to make a natural mineral water, are small indeed, compared with those which have resulted or evolved to a cell and cell-

products; not the less, their high therapeutic powers show that natural mineral waters have an energy in the direction of protoplasmic modes; they are in the path of those greater atomic condensations and energies, which exist in the cell-evolved aromatics, and whose molecular states so powerfully affect protoplasm.

Vegeto-Alkaloids.—If our minds are strongly directed to the existence of some great Form in the molecular correlations of the Aromatics to protoplasm, this is still more the case when we view the vegeto-alkaloids. Before the era of Newton mankind were as familiar with the facts now grouped under the Law of Gravitation as we now are, yet the human mind had not submitted to see the great common Form or Law of the facts and phenomena amongst which they lived and moved. Similarly, prior to F. von Schlegel, the truths and facts of comparative language and mythology were not seen, even though armies of learned men, with leisure, had passed through the universities of Europe, for a period of ten centuries. In these instances we cannot fail to see that the main cause of the slow evolution of knowledge lay very much in the bad method of the human mind. They were centuries of disputation and of dogmatic assertion, and not of true submission of mind: hence arose the *Novum Organum*.

(To be continued.)

Special Articles.

VOLUNTEER MEDICAL REGULATIONS.

PART II.

(1) Training of Regimental Bearers.

1. Two men per company are to be trained.

[In some volunteer regiments it may not be possible to obtain two men from each company, though the number may be made up by taking men from other companies, without regard to companies. Officers commanding companies object to have their ranks depleted. This is one of the difficulties. Bearers should be selected with a view to strength and intelligence. When commanding officers find how useful the ambulance party is, and how necessary, greater facilities will be allowed for its training.]

2. Twelve lectures, with drill, are required to instruct bearers, ten of which must be attended by members of class.

3. During camp these lectures can be given, if the time be distributed as follows:

- (1) 6-30 A.M. Theoretical and Practical Instruction.
- (2) 10-30 A.M. Stretcher Drill.
- (3) 2-30 P.M. Theoretical and Practical Instruction.

[The men will be on parade whilst the regiment is drilling. "Loafing," so objectionable to adjutants and commanding officers, will thus be prevented.

Uniform for Parade .. 1-3 Fatigue Dress.

" " .. 2 Full Dress.

Surgeons to appear in same uniform.

It may be objected that the surgeons will be overworked by this, but the other officers have to attend parades at same time. We should not shirk our share of the work.]

(2) Subject of Lectures.

1. The subjects of lectures are detailed in "Manual for Medical Staff Corps," a copy of which medical officers should have. A modification must be made, as part of the course for medical staff corps hardly applies to the needs of regimental bearers.

2. The following syllabus we have practically tested, and it may serve as a guide to others.

(3) Lectures.

1. Introductory; outlines of anatomy and physiology of the human frame; practical instruction with, and explanation of the use of bandages.

2. Outlines of anatomy and physiology continued; practical bandaging, etc.

3. The arrest of hæmorrhage, arterial and venous; wounds and their treatment; fractures: *practical*, bandages, splints, contrivances.

4. Fractures, dislocations, sprains, foreign bodies, bites, burns, scalds; practical illustrations.

5. How to act in emergencies, fainting, apoplexy, sun-stroke, drunkenness, poisoning; practical bandaging, etc.

6. Drowning and the resuscitation of the apparently drowned; the Marshall Hall, Sylvester, and Howard methods; suffocation by gases, hanging, choking. Practical instruction in the above.

7. Nursing: general principles, medicines, poultices, baths, leeches.

8. Stretcher drill rules and cautions; opening out, preparing, folding, lifting, lowering, marching with stretchers; carriage of sick or wounded on stretchers; loading and unloading of wagons.

9. Improvised methods of carrying sick persons; improvised stretchers; practical drill.

10. The pitching of tents and hospital marquees; latrines; cooking; practical drill and tent pitching.

11. Field medical administration; regimental medical arrangements; the formation of bearer companies; movable field hospitals, etc.

12. General summary, etc.

[At the morning and afternoon parades the theoretical instruction can be given with practical illustrations; at the 10-30 parade the time should be given up to stretcher drill, to improvise methods of carrying, etc. We have found that a continued series of lectures has a better result than when extended over a number of weeks at the rate of one a week, and is not too great a strain upon the men. It is well to go over the subject again and again. On their return home the men can be supplied with copies of the Manual, and can read up, and when ready for examination application must be made through officer commanding for an examiner, fixing date, time, and place suitable. Those who pass receive a special certificate, and are entitled to wear the Geneva badge, but their efficiency must be yearly attested.]

(4) Position and Duties of Bearers.

1. At inspection, when the regiment is in line, the ambulance will take up position in rear of the band.

2. At the march past the ambulance will follow in rear and then fall out, and be inspected by the medical officer.

3. The detachments may be told off to special positions during inspection, so as to be in readiness for any emergency.

4. The ambulance will be examined by inspecting officer.

5. Should there be any manœuvres, such as "the attack," the ambulance should be in position in the rear. Their efficiency can be tested by the men being ordered to fall out as if wounded.

6. Certain number of men should be told off for permanent duty in camp.

(To be continued.)

THE ST. JOHN AMBULANCE ASSOCIATION.

By ALFRED J. H. CRESPI, OF WIMBORNE,

HONORARY LIFE MEMBER, LECTURER AND EXAMINER OF THE ASSOCIATION.

SO MANY misunderstandings obtain, even in medical circles, as to the objects of the St. John Ambulance Association that my friend, Sir Herbert Perrott, Bart., the Chief Secretary, and, may I add, the mainspring of the Central Association, has suggested that I should put matters in their true colours before the profession, and clear away those misconceptions. It cannot be too generally understood that ambulance pupils are not expected to supersede the doctor. Against any such pretensions on their part the lecturers and the examiners fight persistently; but they are trained to assist the medical practitioner, to understand his directions, and to render immediate assistance before his arrival—nothing more. To prevent, not merely to relieve suffering, should be the primary object of medical practitioners and of philanthropists, and the medical profession shows to the greatest advantage in its too often thankless labours when it keeps this fact ever before it, regardless of the loss it may itself sustain in consequence of carrying out its mission unselfishly and heroically, and the world owes it a debt which it is making no attempt to pay. Not often are the direct interests of a class so diametrically opposed to those of the community at large as are those of doctors, publicans, pawnbrokers and policemen. The greater the suffering the better for the doctors; the more excessive the intemperance the better for brewers and publicans. Thank heaven! it is one of the grandest traits in the character of doctors, that though no men are more inveterate grumblers, none complain more loudly and with better cause of poor pay and hard work; none, nevertheless, more generously sacrifice themselves for the public good; had it not been for their exertions how few hospitals, asylums, and sanitary measures would ever have seen the light. They are the men who carry on and direct nearly all enlightened measures for the prevention and relief of sickness.

Nothing is easier than to prevent disease and suffering. If any one doubts this, let him think of the frightful effect of discharging a pistol into the mouth, of drinking a little strong acid or alkali, or of sprinkling the eye with unslacked lime. When an injury has been sustained, in too many cases nothing can be done to aid the sufferer: in many the patient can be relieved but not cured, and life is either ultimately cut short, or drags on its weary way in the midst of suffering and anguish that wrings the hearts of friends and sadden the medical attendant.

In these days there is incessant rushing to and fro, and exposure to great risk is consequently far commoner than formerly, though, at the same time, accidents are less frequent and incomparably better attended to. This is in part due to the greater intelligence of the age, in part to the wise forethought which provides means for diminishing suffering. But the dislike to making the secrets of any calling common property is natural, and nowhere more marked than in medical circles. Practitioners do not like the knowledge, which they regard as peculiarly their own, and on which their earnings depend, to be made common property, and perhaps they often fancy that the halo which invests mystery would be thereby removed. Instead of the public looking, as they ought, upon the work of the doctor as peculiarly difficult, and demanding exceptional abilities for its efficient discharge, there is a tendency to fancy that a few simple rules will carry him along most comfortably,

and I have heard this very plainly expressed in highly cultured lay circles. The *one* demand of ambulance pupils is to be told briefly what to do in certain emergencies, so that they can dispense with skilled medical assistance. They sometimes show actual impatience when the lecturer insists upon laying a solid foundation, and giving that information on which practical work rests, while as a fact not one pupil in 1,000 would be any the better in a month for a hundred brief rules.

It was in Italy, the land that has perhaps done more for the world than any other, that the first Ambulance Society had its origin. In 1048 some benevolent merchants of Amalfi, a famous town on the Gulf of Salerno, were deeply moved by the sufferings of the Crusaders, and these generous and devoted men founded what speedily developed into the world-renowned Order of St. John of Jerusalem, a body of Knights, Priests and Serving Brothers, whose vocation was the relief of suffering. Nothing could surpass the heroism of the members of the Order: in cold and heat, on the battlefield, and in the fœtid hospital they were first and foremost, nursing the sick, and binding up the wounds of the broken-hearted. With a catholicity of feeling peculiarly characteristic of Italy no restrictions were imposed as to the condition and nationality of the recipients of their bounty; if a man needed succour he was entitled to it, and they acted up to their glorious motto with unswerving fidelity—*Pro Gloria Dei, Pro Utilitate Hominum*. In this respect the Order has always been Catholic, and it sets a noble example to those miserable little cliques which, in some country towns, try to exclude from ambulance lectures persons thought not to be in a sufficiently good social position. I am sure that Sir Herbert Perrott, would shudder at such a perversion of the Association, and would make his voice heard in protests that would be both loud and firm.

After a time the Order fell on evil days, and it has for centuries been shorn of the glory and dignity that once invested it. It still survives though, and has many members, who of course are Roman Catholics, and it still possesses a few communities in England. But the St. John Ambulance Association is a branch or expansion of the Order not recognised by the Catholic Order, though connected with what now purports to be the English representative of the once brilliant and powerful English Langue. That Association is doing a magnificent work; it has saved thousands of lives, and prepared over 200,000 people to face the severest accidents with some amount of intrepidity and knowledge. Its headquarters is the ancient gateway of St. John, the only remaining part of the once magnificent Priory, which was the chief house of the Order in England, in those times when the Prior was the Premier Baron of England. At St. John's Gate, Clerkenwell, Sir Herbert Perrott and his able coadjutors are always to be found discharging their untiring and harassing duties. There is in addition a chairman—Sir Edmund Lechmere, an honorary director of stores—Mr. John Furley, and a large body of vice-chairmen and other officials. What is the object of the Association? Well, it frames rules for the guidance of lecturers, and provides, in return for very moderate charges, the apparatus and appliances for the immediate treatment of the injured, for their conveyance to their homes or to hospitals, for the relief of the apparently drowned, and of the burnt and poisoned: it supplies diagrams, bandages, and splints; it sends out examiners, who report upon classes and examine those pupils who wish to have their attainments tested, and it gives

the successful ones a most tasteful certificate. All this means expense, and while the charges are kept down to the lowest figure, very moderate fees have to be exacted from pupils to defray working expenses.

An ambulance class is generally carried on somewhat in the following fashion. Some persons interested in the prevention of suffering and in providing first aid to the wounded having decided to form a local class, they usually borrow or rent a room, go round among their friends and neighbours, get the names of intending pupils, write to the Chief Secretary, and obtain prospectuses and information. After a while a class is formed: and some local doctor is commonly asked to lecture, usually gratuitously. If he is a busy man and not accustomed to public speaking, he generally makes a sad mess of his instruction; he probably flounders along knowing only imperfectly what to teach and how to teach it, and his pupils with difficulty, after a time, begin to understand what they have to learn, and when the course is over are very badly prepared for the examination, and still less for emergencies. When all is done, an examiner is deputed to go down, and he does his best: sometimes finding the pupils admirably taught and nearly perfect; at other times totally ignorant. Having had many classes, and seen much of the work in the past seven years, the following is the course I always advise, and it seems to me excellent, and not to need any modification.

In the first place, I strongly urge that there should be a public preliminary meeting, and not merely, as so often now the case, a grand final gathering. At that preliminary meeting ladies and gentlemen should be admitted. A good lecturer and speaker, with practical acquaintance with the work, should be invited, and he could convey invaluable information, preparing the pupils for the instruction proper. Then, when the lectures commence, the instructor ought not only to be a good practitioner fit to meet any call on his skill, but capable of teaching, and well acquainted with the precise work needed by pupils. It must be remembered that the best teaching is that directed to preparing pupils to deal with the emergencies of every-day life, and to showing them how to use for the purpose those things and only those which are always at hand. Surgical appliances are never forthcoming, and could not, if they were, be used by the majority of pupils, but, fortunately, everything required can be extemporised without any trouble then and there, and this I shall proceed to show.

As a rule, it is far better for classes, in small towns, to have properly trained lecturers—who know what they are about, and can impart reliable information pleasantly. In case any one thinks that I am anxious to have more gratuitous work, I beg to give notice that I have had half a dozen such classes, and henceforth shall not be prepared to give my time, and pay my own travelling expenses, as I have several times done in former years.

The course proper consists of five lectures, and local lecturers sometimes compress the whole work into an hour a time, though two should be the shortest thought of, and as the fifth lecture is occasionally given four weeks to the day after the first, and the examination for local reasons sometimes follows on the next day, the pupils cannot possibly in such a case, be well prepared.

The first lecture should be public and free, and open to both sexes. In that lecture or address, the scope of the work, the basis on which the Society rests, and the need for the work, should be made thoroughly clear. Two or three

weeks later the course proper should commence, and though the instruction does not comprise anything coarse or objectionable, it is better to keep the sexes distinct, and to have separate classes for ladies and for gentlemen. Nor is it desirable that the classes should be large, as the practical work has then a tendency to be imperfectly taught.

I prefer a course of seven lectures, exclusive of the explanatory or public address. In the first and second, I describe the marvellous mechanism and structure of the human skeleton, pointing out its enormous strength, its singular beauty, and its fitness for its work. It is astonishing how much amusing and curious information can be given, and how close is the attention of intelligent pupils, when the lecturer is well up to the work. There is enough to occupy at least an hour and a half lecturing each time, and in the last half hour I point out the uses of the well-known triangular bandage, impressing upon the pupils that they must regard it simply as a convenient form of handkerchief—the latter being the appliance, which in accidents they would generally have to use.

In the third lecture injuries to bones are taken up. I then describe the different kinds of fracture, and insist on the importance of bandaging and supporting the injured part carefully. The amount of work to be got through in this lecture is almost too great for one afternoon. I point out that splints are nothing but firm supports to be placed by the side of the injured part; and that bits of twig, wood, hay bands, brown paper, great coats, grass, book covers and a hundred other things can be put together, padded and applied without difficulty, by any ingenious person. Technical details are entirely omitted and wholly unnecessary.

The fourth lecture deals with the control of hæmorrhage; and I show that pressure, properly applied, will effectually and infallibly stop loss of blood, and that for this purpose a bandage has to be passed round the injured part, both above and below, and that such a bandage or tourniquet can be made of elastic bands, handkerchiefs, portions of dress, and fifty other things. There is, in this lecture, great scope for information regarding the circulation of the blood and the course of the greater blood vessels. Nor must the lecturer fail to remind his pupils that they are only stop-gaps, pending the arrival of the doctor.

In the next lecture, all forms of suffocation are taken up after some remarks on respiration, and invaluable information can be conveyed. It is like a new revelation to pupils to learn that drowning, hanging, and suffocation from foul gases, are identical in their primary effects, and that the treatment consists in freeing the neck and mouth and setting up artificial respiration. Burns and scalds come in for a little information; and there is much to tell regarding injuries of the eye and foreign bodies in the ear: about sunstroke and frost bite, and the first treatment of fainting and of epilepsy. Poisoning is the most strictly technical part of the instruction, and in dealing with it it is impossible to be popular.

The last lecture is treated differently according to the sex of the pupils. In lecturing to ladies, the elements of nursing are touched upon, while men are taught and shewn the best way of carrying the injured, and of extemporising stretchers of blankets, tablecloths, sheets, and so forth. Now, although I do not suggest that men should be taught nursing, I have a strong opinion that the removal of the wounded should also be part of the instruction of a female class; ladies may not always be physically competent to carry the wounded, but they may at any time be called upon to direct the move-

ments of persons engaged in that work, who have not had previous instruction as bearers. The seventh lecture should be recapitulatory, and due emphasis should be laid on the great principles which pupils have to put into practice. To accustom pupils to think and to apply their knowledge, as well as to prepare them for the examination, I give out five papers of questions, one on each lecture proper, and I urge pupils to go through them carefully; and I usually also set two examination papers similar to, though not identical with, those which the examiner will give on his arrival. A week at the very least should intervene between the last lecture and the examination; at the latter pupils are given six or eight simple written questions, and are asked a few *viva voce* ones, as well as directed to go through some simple bandaging and other operations. No industrious and intelligent pupil should have the smallest difficulty in passing, or need hesitate to go up. The examiners are most kind, and their requirements far from stringent, indeed they err on the side of asking too little, and generally show an amount of consideration for the nervousness and imperfect knowledge of pupils, that, at any rate, saves the latter from unnecessary rejection, though it may not always give greater value to the certificate of the successful ones. When candidates are rejected it is generally from gross incompetence and crass ignorance; and too often the possession of a certificate is hardly the guarantee of efficiency that it ought to be. Careful home reading and practical work will, however, keep the pupil well abreast of the lectures, and enable him to profit to the full from them.

The late Lady Brassey was a good friend of the Association, and in her lively, energetic fashion did much to extend ambulance work to parts of the world where it had hardly been heard of. In her excellent pamphlet on the subject she speaks warmly of the greater value of eight lectures, and evidently prefers that number to the orthodox five. Although I agree in the main with all that she has said, I do hesitate to endorse a suggestion of hers that in some cases there should be two lectures a week, and that the course should only extend through three weeks. She adds that the lectures actually make more impression on the minds of members of the class, when compressed into the shorter time. My experience totally differs from hers. What is hurriedly learnt is usually as quickly forgotten. Pupils should read and ponder, and the longer, with obvious limitations, the course extends the better. Circumstances may occur in which a dispensation might be obtained from head quarters, and the course and examination might be compressed into three weeks, and no doubt Sir Herbert Perrott would show proper consideration on having a suitable application made, but it would not often be expedient to relax the present not very severe regulations.

Reviews.

Collected Essays in Preventive Medicines; with Glycosuria.
By WILLIAM SQUIRE, M.D., F.R.C.P. London: Churchill, 1887.

THE popular adage "prevention is better than cure," is practically enforced and illustrated in this collection of essays, as will appear from a reference to the topics included—viz., infection and disinfection, with the inseparable connection of isolation in checking the spread of infective

disease; the duration of infection in different infectious fevers; a table of the incubation and infective period of each disease; a detailed exposition of precautions to be observed against conveying infection in their early stages; an account of various disinfectants and germicides; observations on the health of children, their temperatures in health and disease; on glycosuria with reference to the prevention and treatment of diabetes. Although this last-named essay would seem to hold a secondary position in this volume, its perusal will shew it to be of primary importance with reference to the discussion of preventive medicine. Dr. Squire gives a most useful table of the duration of the infectiousness of each infectious disease, indicating (1) The time at which the fever is likely to show itself after exposure to infection; (2) The time after separation from infection, when, if no illness appear, we may conclude the disease has been escaped; (3) The time for the rash or other characteristic sign of the illness to appear after the first sickening for it; (4) the time from the beginning of the illness to the end of the infectiveness. In this table it will be observed that, in most cases, the longer the period of inoculation the shorter the duration of infectiveness. The information to be derived from this table may prove of value as a guidance in the question of isolation of the subjects of infective fevers. On this point we may quote a judicious caution—"Do not seek change of air too soon for scarlet fever convalescents; they are better in their beds for the first three weeks." They gain strength just as fast, and avoid danger of infection to the conveyance or lodgings to which they go. Free ventilation, Dr. Squire points out, is at the root of all thorough disinfection. "The action of any agent absolutely destructive to infective particles is necessarily very limited, both as to the extent and the conditions in which it can be applied; for each one of them in its full intensity is also destructive to organised matter and to life." An examination of the disinfectants and germicides that have been employed, together with the means for their application, is given by the author, who judiciously observes that it is wise to keep to one disinfectant, and to bear in mind the way in which it acts.

An essay on the health of children is reproduced from "Our Homes." This essay, although written for the general reader, will well repay the professional man the time bestowed upon its perusal. Following thereupon is a section treating of variations of temperature in the diseases of children, the author's object being to add certainty to the diagnosis and to the power of identifying, at the outset, those diseases most requiring early recognition, a point of much importance not only in the treatment of the individual, but for the protection of other members of a family and the community at large. Examples of various diseases of infancy, together with tables and diagrams showing variations of temperature, accompany this essay.

In the essay upon the signs of perverted nutrition afforded by the kidneys, Dr. Squire remarks upon the somewhat too readily accepted theory of acetonaemia:—"The uncertainties of medicine recede with any forward step made on sound deductions from facts, slowly accumulated and carefully compared; they re-appear with the easy repetition of old or new theories, or the lightly adopted guess, the latter recommended on the false ground that it may be supported by subsequent experiments. These should precede and not follow assertion. Our knowledge of diabetes has been of late thus obscured. . . . As to a hypothetical acetonaemia,

lately large quantities of acetone have been given for a considerable time without the effects on the nervous system that have been attributed to it. Acetone is found in most febrile attacks in some stages of growth, and in disturbances of digestion derived from the breaking up of albuminoids; it is not found in rickets during lactation." "What auscultation is as our guide to diseases of the chest, palpation to those of the abdomen, nerve-signs to the various affections of the brain and cord, such the examination of the urine is to diseases of the kidney." "The object at present in view is neither the discovery of kidney disease nor the exclusion of diabetes—a single examination mostly suffices to determine these points—but to insist on the value of frequent periodic recourse to the state of the kidney excretion as a guide to abnormal action in other organs, and to the nutritional change of the whole body. For evidence against the much abused liver, an organ more sinned against than sinning, it is safer to trust to the signs of believing colouring matter in the urine than to any supposed bilious look in the face or yellowness in the complexion. . . . Where discolouration is owing to bile in the blood, its presence in the urine can easily be verified by the green change produced by a drop of iodine solution, and this evidence is required to show that bile is still present in the blood, as the staining may remain after its cause has ceased to exist."

We have connected these three extracts in order to point out the drift of the author's observations on kidney derangements, with the further exposition, or history of glycosuria. For the last forty years, Dr. Squire states that it has been his rule to apply Fehling's cupric test, as well as nitric acid, to the urine. Among the last two hundred cases in his notebook, he finds glycosuria in no less than thirty-nine. The histories of these cases are briefly given by the author commencing with the following: The number of cases of glycosuria here under review, though of themselves insufficient to warrant any very general conclusions, are not without value; they show the degree of frequency with which this class of case occurs in proportion to the incidence of other ailments, and they admit of comparison with the deductions commonly received as to diabetes. . . . They will agree with Bouchardat's estimate that glycosuria occurs once in every twenty invalids among middle-aged persons of the well-to-do classes. It may be objected, observes Dr. Squire, that the majority of his cases are in nowise related to those of a more persistent glycosuria liable to pass into diabetes. Glycosuria is, in fact, only one of the signs of disturbed nutrition processes. Impaired nutrition may happen to all at any age. It must occur with advancing years, and glycosuria is one evidence of it.

Dr. Squire very rightly rebukes the laxity of thought and expression which attributes every obscure symptom to "gout." To speak of gout in this manner is to be like bone-setters, who find in every stiff joint "dislocations," which they profess to reduce. "For both," the author severely but gently adds, "ignorance is the only extenuating plea." After giving a descriptive account of the relations of glycosuria to decrepitude and degenerations, Dr. Squire proceeds to the consideration of the elimination of urea. The treatment of diabetes, and of some conditions allied to glycosuria closes this section of the volume of essays. Under this head Dr. Squire observes: "In confirmed diabetes, where diet is strictly attended to, and made the chief part of the treatment, it is well at first to give no

medicine at all; stating his distrust of alkaline remedies, and repudiating the theory of acidity of the blood as leading to injudicious administration of alkalies with consequent deposit of urate of soda in the joints and arteries. We must not omit to point out that the author advises the substitution of glycerine instead of the use of sugar for diabetic subjects. A special diet is, of course, also enforced."

We hear sometimes the expression of a common simile, "as full of matter as an egg's full of meat." It is to be hoped that the author will pardon our application thereof, to this volume of "Collected Essays."

W. B. KESTIVEN, M.D.

Dissolution and Evolution and the Science of Medicine. By C. PITFIELD MITCHELL, M.R.C.S. London: Longmans, Green & Co., 1888.

THIS book proposes to "disseminate some new applications of Mr. Herbert Spencer's leading generalisations. The sustaining elements of the synthetic philosophy are the doctrines of evolution and dissolution. The design is to inquire whether these may not be made fertilising principles for large collections of the data of pathology." The raw material of medical science grows with an acceleration of rate that gives acuteness to the need for great central truths about which facts may be organised. The author ventures to think "that the doctrines of dissolution and evolution supply in useful measure this large and pressing want." He considers that "to make all diseases, from a whitlow to mania, one in principle by cause and effect is an aid to practical thought; it vastly augments the carrying capacity of the mind." The proclivity, handed down to us from pre-scientific times, to regard each disease as individual, is to be counteracted by the principles of dissolution and evolution—*general truths* that will break down the factitious divisions which conventionality has raised.

The first chapter deals with inflammation and suppuration as dissolutational changes, antithetical to the process of evolution; and he defines dissolution as "a disintegration of matter and concomitant absorption of motion, during which the matter passes from a definite coherent heterogeneity to an indefinite incoherent homogeneity, and during which the retained motion undergoes a parallel transformation." The author then discusses resolution and repair as evolutionary changes, the integration of matter and dissipation of motion, resolution giving us a reversion of the antecedent partial dissolution. The change from a definite coherent heterogeneity to an indefinite incoherent homogeneity is reversed, and the change from an indefinite incoherent homogeneity to a definite coherent heterogeneity restores the inflamed tissue to its normal state. The various retrograde metamorphoses are shown to be dissolutational changes, and the effects induced by vegetable and animal parasites also exemplify dissolution. "The essential functional and structural perturbations from *tænia solium* and its cysticercus, from *tænia echinococcus*, bothrioccephalus latius, trichina spiralis, and the rest, are changes to diminished definiteness, coherence, and heterogeneity; and that absorbed energy is the cause of those changes is quite patent."

The neoplasms exemplify both dissolution and evolution. The infective granulomata having a tendency to the formation of cicatricial tissue, their life history shows alternations

of dissolution and evolution. The various other neoplasms are dealt with in order, and the data brought forward sustain the conclusion that the genesis of neoplasms is another example of histogenic dissolution. In the growth of tumours there must be recognised a struggle for existence, as going on between the old tissues and their young, the survival of the latter constituting their neoplastic power. The tissues germinate, the forces of life being nearly spent; but the new generation of cells is endowed—by what process we know not—with the prepotency of all germs, and the latter survive in the competition for nourishment. If the cells proliferated in inflammation eventually become tumours, the combination of requisitions for tumour growth have been accidentally fulfilled. We are informed on page 101 that "Cancer may dry up and be, in fact, cured, which is sometimes seen in the breast, and occasionally in the internal organs." Surely this statement is only in accord with the queries and the wishes of anxious friends, but is not borne out by the observations of those whose judgment is to be relied upon. Many other of the statements with regard to the development of neoplasms will scarcely bear critical investigation from the point of view of the scientific pathologist. The author advances many interesting and ingenious speculations, but they bear the stamp of the library rather than the *post-mortem* room, and are expressed in such ambiguous phraseology that it is difficult to catch their import.

Of the chapters on special diseases we can only select the remarks on pneumonia and phthisis. We are told that these diseases are essentially a disintegration of the body. "Cells and serum are separated from the blood, and the alveolar epithelium desquamates." "Phthisis is an obvious wasting away, the waste matter being thrown off abundantly as sputum, as hæmorrhages from the lungs, as diarrhoeal discharges, as sweats, etc." The question is raised whether it is possible to connect these disintegrations with absorptions of energy as their causes, and it is pointed out that this would be possible and easy if the parasitic theory were accepted. In the case of the liver and kidneys, it is assumed that the parenchyma of these organs is destroyed by matters derived from the blood. In the case of the lungs, the routes are four, irritants coming with the air breathed, by way of the pulmonary arteries, by way of the bronchial arteries, or by continuity of tissue. Excluding the last two routes, there remain the air and the pulmonary arterial blood, by which the irritants producing ordinary pneumonia and phthisis may arrive. Our author states that, although the micrococcus pneumoniæ and bacillus tuberculosis may reach the pulmonary tissue with the respired air, "these contributory and extraordinary sources of pneumonia and phthisis have not been accepted by physicians and pathologists as sufficing for the daily occurring forms of these diseases." Accordingly, he falls back upon the blood distributed to the pulmonary parenchyma by the pulmonary arteries, and after pointing out the analogy between the relation of the pulmonary arterial system, the portal system of the liver, and the renal arteries, to the parenchyma of those organs respectively, he concludes that "both pneumonia and phthisis are initially dependent on the action of pulmonary arterial blood made irritant by the ingestion of super-abundant, improper, or impure food; closely associated conditions being a relatively feeble respiration of irritant air." Such a bare statement of the author's theory scarcely does justice to his arguments; but we are bound to say that the argument

does not convince us of the truth of his inference. We think he under-estimates the value of the large array of evidence in favour of the parasitic theory of both phthisis and pneumonia, whilst he unduly exaggerates the disintegrating effect on the lungs of blood charged with recently digested food products.

After a consideration of various other special diseases, we find the following paragraph:—"We have been brought to recognise that the multiform phenomena of disease are originally and innately identical. Neglecting a few aberrant and equivocal examples, true disease is that which dissolution verbally symbolises—a disintegration of matter caused by an absorption of surrounding energy. But in the body, as out of it, simultaneous and successive with dissolution is the distinct and contrary process of evolution. Together, these two processes comprehend not only the changes that are essential to disease, but also its non-essential, though inseparable concomitants." The volume concludes with some utilitarian considerations, as an outcome of the above stated generalisation.

We have given our readers a few brief abstracts, as an indication of what this book contains. It has within it much matter for concentrated thought, and as material for mental gymnastics cannot well be surpassed. It is no epitome of facts in pathology, but rather a series of metaphysical disquisitions in which lovers of mental jugglery must delight.

R. SHINGLETON SMITH, M.D.

A Hand-book of the Diseases of the Eye, and their Treatment.

By HENRY R. SWANZY, A.M., M.B., F.R.C.S.I., Surgeon to the National Eye and Ear Infirmary; Ophthalmic Surgeon to the Adelaide Hospital, Dublin, etc.

THE author of this compact little volume is to be congratulated on the appearance of a second edition of his work, which has already taken an honourable place among the reliable ophthalmic text-books of the day. The field of ophthalmic literature has now grown so extensive that a faithful epitome of its facts can hardly fail to be of use even to those who are engaged mainly or entirely in that kind of work; while to the general practitioner or student it becomes an absolute necessity. The volume before us seems to us to give as full and accurate account of the various diseases of the eye, as can well be compiled within the compass of some 450 pages, and shows the author to have made himself extensively acquainted with British and foreign ophthalmic literature. We are glad to find the work is not burdened with the comparatively useless anatomical descriptions generally found even in small text-books. The first three chapters are mainly devoted to the optical part of the subject. This is the *bête noire* of the ordinary student, and it is of the utmost importance it should be presented in an intelligible and, if possible, attractive form. We believe the author has fairly succeeded in this task, and that no one of average intelligence and perseverance will have any difficulty in mastering the main facts of the subject. In the chapter on the diseases of the eyelids, there is almost an *embarras de richesse* of methods for the cure of entropion and trichiasis. We cannot agree with the author, when, in describing Snellen's plan, he says that hypertrophy of the tarsus "is always present." We believe, on the contrary, that the reverse is the case, and, therefore, regard as bad in principle all operations of which the removal of a piece of the already

contracted tarsus forms an essential part. On the subject of sympathetic ophthalmia the author states, that "investigations made in recent years have placed it beyond doubt that sympathetic ophthalmitis is an inflammation propagated to the sympathising eye by direct continuity through optic nerves and chiasma from the exciting eye, as erysipelas extends over the skin." We hardly think the author is justified in making so sweeping a statement, and especially in ignoring all rival theories as to the nature of this dread affection. The chapter on the "Motions of the Pupil" contains a mass of most valuable information, and hardly requires the apology for its appearance which the author makes in the preface. The illustrations to be found in the work are good and fairly numerous, and the type is clear. On the whole we regard the work, for its size, as perhaps the most complete and reliable in the language.

RICHARD WILLIAMS.

The Principles of Cancer and Tumour Formation. By W. ROGER WILLIAMS, F.R.C.S., Surgical Registrar to the Middlesex Hospital, etc. London: John Bale & Sons. 1888.

IN the introductory we learn that the present work is only the first instalment of a treatise, which is to be completed in six parts. The first chapter deals with "Growth." The author proceeds to show that it (growth) must be regarded as a necessary concomitant of evolution, and contends that in proceeding with the investigation into the phenomena of growth in living things, vegetable life cannot be considered apart from animal life, since the same fundamental properties are common to both. Development is shown to be a change from the general to the special, and "change of nutrition is unquestionably the true cause of all morphological variations." In the second chapter on "Reproduction," the great principle of modern pathology—that every pathological process has its physiological prototype—is strongly insisted upon. The author shows that there is no fundamental distinction between the various modes of reproduction—sexual and α -sexual, the process of repair and formation of tissues, the reproduction of lost parts, and the various morphological variations, including bud, cancer, and tumour formation. He maintains that all of these apparently so different phenomena, are merely modifications of one common process, which underlies and is the cause of them all—to wit, cell growth and multiplication. The various methods of new cell-formation are then minutely described and illustrated. The phenomena of *parthenogenesis* as illustrating that there is no such fundamental distinction between *gamogenesis* and *agamogenesis* as is commonly supposed, is well exemplified by our common honey bees. A male individual (drone) arises out of the egg of the queen, if it has not been fertilised; a female (queen or working bee) if the egg has been fertilised.

The examples showing that in plants the relation of the growth of the reproductive organs to that of the leaves depends on the amount of nutrition or richness of the soil, are very interesting; also that the component parts of a flower can change, as when anthers can be seen to undergo transformation into petals, in consequence of excess of nutrition. The experiments of Trembley and of Dugès on the hydra, and on the planarians, are quoted to show that it is quite impossible to discern any distinction between the processes of repair and reproduction by gemmation or fission. In the chapter on the "Evolution of Vegetable

Neoplasms," the author endeavours to show the physiological prototype of cancer and tumour formation. He thinks the neoplastic process can be more satisfactorily studied in plants, because of the absence of nerves and blood vessels which complicate and obscure it. The formation of vegetable tumours is shown to be essentially an abnormal bud evolution. Knaurs, woody outgrowths, and broussins or burrs are described, and shown often to be due to abnormal nourishment. The absence of any infectiveness (malignancy) in vegetable tumours is explained by the absence of a highly specialised lymph-vascular system to transport the proliferous cells. In the chapter on the "Evolution of Animal Neoplasms," Mr. Roger Williams avails himself of the classification of this as to the division of the blastoderm, and consequently divides neoplasms into two great classes—the archiblastic and the parablastic. These are again divided into two sub-classes, *the lowly* and *the highly organised*. Under the term "epitheliomata," the author includes all malignant epithelial neoplasms, whether their constituent cells be squamous, cylindrical, or glandular; thus, those growths usually named carcinomata, are called "glandular epitheliomata." The author does not believe in any specific difference between innocent and malignant neoplasms. The emancipation of the constituent cells of lowly organised neoplasms from the control of the parental organism is more complete than in the case of non-malignant growths. The infectiveness of cancer is not due to the presence of micro-organisms, but to the autonomous power of its constituent cells, which everywhere tend to reproduce the parental type. In the ætiological chapter the author regards all new formations as attempts of the organism to adapt itself to changed, abnormal, or injurious conditions of life. The genesis of all neoplasms is attributed to excessive activity of certain lowly organised cells of the part, determined by local excess of nutrition, the result of intrinsic or extrinsic stimuli. With regard to the influence of extrinsic causes, the author adopts Darwin's conclusion, that in each individual "the conditions of life play but a subordinate part in causing any particular modification; like that which a spark plays when a mass of combustibles bursts into flame, the nature of the flame depending on the combustible matter, and not on the spark." We can cordially recommend this original and well-written monograph to all interested in the subject of tumours.

Short Notices.

The Medical Institutions of Glasgow: a Handbook prepared for the Annual Meeting of the British Medical Association, held in Glasgow, 1888. Compiled and edited at the request of the Local Committee by JAMES CHRISTIE, M.D. Glasgow: James Macklehole & Sons.

THIS monograph, printed and given away by the Local Committee to the members of the British Medical Association, contains very interesting accounts of the medical institutions of Glasgow, contributed by twenty-two different writers. It is a pleasant *souvenir* of the meeting, and the committee are to be congratulated on their enterprise, and on the manner in which the work has been produced.

The Provincial Medical Journal,

SEPTEMBER, 1888.

THE mortality among young children in Egypt should be appalling, but as a matter of fact but little attention is paid to it by those in power. Were adults to die at the same rate, the selfish survivors, impelled by fear, would soon raise a clamour; but as it is only the helpless little ones who perish in excessive numbers, there is very little said about it, and no attempt is made to apply a remedy. According to a return published in the official journal there were, during the week ending July 12th, 1,120 deaths in 31 towns with an aggregate population of 1,009,381, being at the rate of 57.7 per 1,000 per annum. Out of these deaths 853 occurred in children under five years of age, representing 76 per cent. of the whole; the birth-rate for the same period was 48.7 per 1,000. These figures are eloquent, and should attract attention: but unfortunately for the welfare of the country irrigation and finance are the only subjects that are thought worthy of consideration in Egypt at the present day. As an otherwise intelligent correspondent of a leading journal remarked some time ago, "the Government has no money to waste on sanitation." The following table, referring to Cairo alone, and its reputed 353,188 inhabitants, is interesting, showing as it does the progressive slaughter of the innocents week by week, whereas the mortality from five years and upwards remains pretty nearly a constant figure:

BIRTHS AND DEATHS, CAIRO, 1888. NATIVES ONLY.

BIRTHS.			DEATHS.					
WEEK ENDING	No.	Per 1000 per annum.	Below five years of age.	Above five years of age.	Total.	Per 1000 per annum.	Above five years per 1000 per annum.	Percentage of deaths below five years.
January 5.....	430	63.3	181	152	333	49.0	22.5	54.3
" 12.....	445	65.5	136	116	252	37.1	17.0	53.1
" 19.....	439	64.6	167	133	300	44.2	19.5	55.6
" 26.....	380	55.9	154	139	293	43.1	20.4	52.5
February 2.....	379	55.8	129	152	281	41.4	22.3	45.9
" 9.....	396	58.3	141	128	269	39.6	18.8	52.4
" 16.....	384	56.5	120	127	247	36.4	18.7	48.5
" 23.....	447	65.8	97	119	216	31.8	17.5	44.9
March 1.....	375	55.2	96	128	224	33.0	18.8	42.8
" 8.....	380	55.9	104	114	218	32.1	16.7	47.7
" 15.....	362	53.3	109	139	248	36.5	20.4	43.9
" 22.....	368	54.2	143	121	264	38.9	17.8	56.4
" 29.....	380	55.9	129	113	242	35.6	16.6	53.3
April 5.....	389	57.3	135	113	248	36.5	16.6	56.8
" 12.....	348	51.2	152	101	253	37.2	14.8	60.0
" 19.....	357	51.7	193	129	322	47.4	18.9	59.9
" 26.....	349	51.4	196	135	331	48.7	19.8	59.2
May 3.....	330	48.6	170	125	295	43.4	18.3	57.6
" 10.....	330	48.6	176	137	313	46.1	20.1	56.2
" 17.....	387	57.0	185	107	292	43.0	15.7	63.3
" 24.....	361	53.1	203	114	317	46.7	16.7	64.0
" 31.....	353	52.0	286	116	402	59.2	17.0	71.1
June 7.....	328	48.3	110	125	235	34.0	18.3	71.1
" 14.....	288	42.4	325	109	434	63.9	16.0	74.8
" 21.....	377	55.5	404	111	522	76.8	17.3	77.3
" 28.....	320	47.1	363	123	486	71.6	18.1	74.6
July 5.....	310	45.6	430	107	537	79.1	15.7	80.0
" 12.....	299	44.0	412	116	528	77.7	17.1	78.0
" 19.....	298	43.9	526	134	660	97.2	19.7	70.6

The causes of this terrible state of affairs are not far to seek, and may be briefly summed up under four heads: 1. Absence of sanitation. 2. Bad water. 3. Improper food. 4. Ignorance.

1. Sanitation is absolutely unknown in Egypt. People habitually live over cess-pools, and houses are so crowded together that neither light nor air can penetrate into their cell-like interiors. Animals and human beings herd together within them—a great portion of their united excrement sinking into the alluvium amongst the foundations. Sunlight is excluded in every possible way, and privacy is sought for at the expense of ventilation.

2. The only source of water supply in Egypt is the Nile. One would think, therefore, that some effort would be made to keep it as pure as possible. Such, however, is unfortunately not the case, for not only is it customary to resort to its banks for the purposes of nature, but numerous mosques and houses drain the contents of their over-flowing cess-pools, when possible, into the stream. The Public Works Department has also sinned in this respect, for some nine or ten years ago it constructed at great expense a series of sewers for Cairo, with an outfall into the Ismailia Canal, where it passes through the town. When the Nile current is strong the pollution, though unpleasant to think of, does not so much matter on account of the dilution it receives; but during the summer, when the Nile and canals are pretty nearly stagnant, the water becomes unfit for drinking, as is abundantly shown by analyses made by competent chemists.

3. The art of feeding children is not understood by the average Egyptian. Unripe fruit, rotten fish, uncooked vegetables, and similar atrocities form part of the ordinary diet, so it is no wonder that the poor little creatures frequently suffer from colic and diarrhoea, or what in the French nomenclature is conveniently termed *gastro-enterite*.

4. When a child falls ill the Egyptian parent has not the slightest idea how to treat it. In ninety-nine cases out of a hundred he seeks no medical advice, or if he does call in anyone it is usually some sorcerer or wise-woman, whose barbarous remedies only aggravate the evil. For want of judicious treatment there can be no doubt but that eight out of ten children die who could otherwise be saved—judicious treatment of course including the application of hygienic rules.

Given the above four factors, with, in addition, considerable heat, and it is no wonder that infant lives should succumb as they do. Heat alone, however, would not account for this mortality, which is almost entirely avoidable. Let statesmen cure ignorance and enforce sanitation, and with its glorious climate Egypt will soon become the healthiest country in the world; and consequently, as sickness means poverty, one also of the richest.

DR. CLIFFORD ALBUTT's address in Medicine "On the Classification of Diseases by means of Comparative Nosology." was one of the most brilliant that has ever been delivered before the British Medical Association. It fully sustained his reputation, and enabled him to show that mastery of style which is one of the chief characteristics of his writings, and which always makes them pleasant to read. He has the faculty of putting abstruse subjects clearly and

precisely, and though he laboured under the disadvantage of speaking in a hall certainly not distinguished for its acoustic properties, he was able to make himself heard, so that his fluent rate of speech did not diminish the pleasure of his auditors. The value of such an address lies in the possibilities that it opens out, and in the development which follows thereon. In this analysis we can only present the chief lines of thought of the speaker, and hope that it may tempt our readers to read his paper in full.

"For some years," he said, "his mind had dwelt on one large conception of medicine, and in making some reflections on the classifications of disease by means of comparative nosology he hoped to start a method which would coördinate the ever-increasing accumulations of their clinical note-books and their laboratories, and create a system which in its turn would direct and inspire the labours of the inquirer of the future. He believed this to be the *novum organum*—its instrument and a clue to its investigation. Twenty-one years before he wrote on the classification of disease, and laid down a number of propositions in the direction he was now advocating; but though some advance had been made, yet the advance has been far less than it should have been. But though Sir JAMES PAGET, Mr. BLAND SUTTON, and others, have dealt with the matter, and although the laborious investigations into minute life have taught us some of its simplest modes, yet we have made no real effort as a profession to cast off our anthropocentric point of view. We must study the pathology of structure and function in the entire series of organisms, and in them recognise the retrocessions of structure and function from higher modes of life, not forgetting the reversions of the higher mental faculties through the instincts and propensities of brutes. If we look at the nervous system, we find that in man it has gained a development so enormously beyond that of the pithecoïd forms, that the diseases of man are heterogeneous. As we descend from pithecoïd types to lower forms—to dogs and cats, for instance—we find their diseases simpler and more localised. As they descended further they found local autonomy still more evident, until in many reptiles we observe a reproduction of amputated limbs, and still lower organisms a reproduction of their wholes in aliquot parts. In man, on the other hand, so readily were local vibrations propagated, and in so many directions, and so profoundly in him had local autonomies been supplanted by nervous government, that modern observers were inclined to say that in man, not fever only, but all maladies were primarily or secondarily neurotic. How are we to proceed to study? In order to attain a true system of classification, or marshalling of diseases of men, animals, and plants, on a basis of affinity, we must pursue four different methods of inquiry—viz., the hereditary, the historical, the geographical, and the experimental methods.

"1. *The Hereditary Method.*—When they looked for the facts of hereditary disease in man, even within the limits of modern records, they found that observation had been almost wholly directed to the detection of the recurrence of the

same form of malady in one family tree. The only persons who could make adequate records of this kind are family medical advisers who had watched over the same households for a long period of years. Public opinion was not yet alive to the importance of such records, and as busy doctors declined in years they were less willing to embody the invaluable results of their experience. Thus a synopsis of all the maladies current in one family tree was rarely or never met with, although they admit the individual was but one link in the chain." He referred in detail to the grouping of different diseases.

"2. *The Historical Method.*—The historical method led to the philosophical in all studies, and no less in nosology. This study has scarcely yet emerged from the prehistoric period. A number of facts have been accumulated by different observers, showing the racial peculiarities thus: Easterns are more insusceptible to neurotic troubles than the English; Welshmen are inclined to be *malades imaginaires*; the Scotch Celt when sick was despondent, and the Cumbrian Celt gives way, whilst the Irish Celt is alarmed, and by sheer buoyancy is saved." The peculiarities of French, American, and other races were duly noticed. It must be premised that Dr. ALLBUTT used the word history in the same sense in which the word natural history is used, and not in the conventional sense.

"3. *The Geographical Method.*—He asked, How have the marked varieties of man arisen? In reply, we can only say in general terms that, as we look backward we find the natural variation of organisms to be more and more under the control of external circumstances, so that, to study the geographical conditions of variations, we must have a special regard to areas long undisturbed, and must register in these the phenomena of morbid variation, with the qualities of soil, aspect, seasons, atmosphere, food products, and so forth. As we must not confound nations with races, so we must not confound kingdoms with physiographical areas. Dr. ALLBUTT stated that the United States statistics and Mr. HAVILAND's enquiries seemed to be the only serious attempts yet made to study the genetic affinities of constitutional diseases by the geographical method. The field is enormous, the discrimination of facts most difficult, and general conclusions are almost impossible at present."

"4. *The Experimental Method.*—Experiment will teach us that drugs and poisons do not vary in their clinical effects upon living beings by gradual augmentation of differences, but by leaps and bounds, as musical flames respond to scales of vibration. It will teach us thus once again that clinical types can be no basis of nosological observation. Thus by following what ARISTOTLE calls the double track, the track of the one into the many, and of the recombinations of the many into the one, we shall analyse and reconstruct the problems of life."

Dr. ALLBUTT concluded an address brimful of suggestions, and illustrated by quotations from writers of the past and present—quotations in many tongues, but yet introduced without pedantry—with a beautiful peroration. "While we

are theorising with diseases, fates prevail over our counsels; nevertheless, with such intellectual powers as we have must we go sounding on our dim and perilous way through words and things. Many of us too well know conditions and times of abasement! times when we see nature beautiful, tragical, but remote, unmindful, pitiless. When we humble ourselves in silence before 'Him who fashioned the foundations of the earth, who spread His light upon it, who binds the sweet influence of the Pleiades, and guides Arcturus with his suns, who gave to the horse his strength, and goodly wings to the people, and who was king over all the children of pride.' The time and circumstance of this convocation bring not these moods of awe and withdrawing, but surely those of hope and uplifting, even to victory; for, like JACOB at Penuel, we have striven with the Great Unknown, not without prevailing. Our mood to-day is rather that of SOPHOCLES, in the well-known words in the Chorus of the Antigone—'Wonders are many, and none more wonderful than man; the power that crosses the white sea, driven by stormy south wind, making a path under surges that threaten to engulf him; and EARTH, the eldest of the gods, the immortal, the unwearied doth he wear, turning the soil with the offspring of horses, as the ploughs go to and fro, from year to year. And he masters, by his arts, the beast whose lair is in the wilds, who roams the hills; he tames the horse of shaggy mane, he puts the yoke upon his neck; he tames the tireless mountain bull. And speech, and wind-swift thought, and all the moods that mould a State hath he taught himself; and how to flee the arrows of the frost, and of the rushing rain; yea, he hath resource for all. Without resource he meets nothing that must come; only against Death shall he call for aid in vain, but from baffling maladies he has devised escapes.'"

THE merits of Dr. ALLBUTT's address stand on a very different platform from the one we have now to consider. Dr. ALLBUTT philosophised; Dr. MACEWEN dealt with practical matters, with something, as it were, tangible; something that could be seen as well as heard of. On all sides we heard unqualified expressions of admiration of the address of Dr. MACEWEN; he stirred up his auditors as seldom have men been stirred before at our gatherings. We remember the enthusiasm which PASTEUR excited at Copenhagen; just such an ovation did MACEWEN receive at the close of his address, which has been pronounced epoch-making. The title of his paper was "The Brain and Spinal Cord." The theorising of the physician has not been without its effect on surgery, so that we cannot afford to scoff at the philosopher, or to say that surgery can stand on a basis of its own. This is strongly brought out. Dr. MACEWEN first gave the history of cerebral surgery. Lesions of the head had at all times held a prominent place in the annals of surgery. Much had been done by surgeons before the present day to advance the healing art as applied to their particular region, but their efforts were chiefly directed to the superficial parts, and their operations were

simple, and undertaken for the most part upon the primitive evidence of direct visual and tactile observation. No reference was made by them to cerebral surgery as now known. There were two formidable barriers to the advance of surgery in this region; first, the fact that the majority of intra-cranial operations were attended by inflammatory action, which so often proved fatal as to cause surgeons to shun active interference; and, secondly, the brain was a dark continent, in which they could descry neither path nor guide capable of leading them to a particular diseased area, and did they attempt to reach it, it could only be by groping in the dark. The cerebrum was supposed to perform its functions as a whole in the same way as the liver, heart, and kidneys performed theirs, their being no differentiation of function. But in recent years abundant proof had been gathered from human pathology to put beyond cavil the broad fact that there are points in the human cortex cerebri intimately related to the motor and sensory functions of certain parts of the body. The apportionment of definite areas and their precise delimitation were still the subject of investigation. For the purposes of the paper, it was enough to recognise that there were certain regions of the brain in intimate relation with the movement and sensation of certain parts of the body, and which, in the presence of either irritative or destructive lesions, gave rise to phenomena which were of the greatest diagnostic value. This extended physiological knowledge enabled cerebral lesions to be more accurately localised, while his experience showed, by preserving aseptic the parts operated on, surgical interference with the brain could be robbed of its chief danger. Dealing next with the present aspect of cerebral surgery, he inquired if the localising motor phenomena were reliable guides to the diagnosis of cerebral lesions situated in the motor cortex? His answer was an unhesitating affirmative. Each case, however, required to be studied on its own merits, the whole phenomena presented, the unobtrusive as well as the prominent features must be carefully searched for, the degree in which each was present must be accurately measured, and the whole weighed and compared with former experience before drawing a conclusion,

Turning from theoretical considerations, Dr. MACEWEN detailed his own personal experience: A man who had received an injury about a year previously suffered from deep melancholy, strong homicidal impulses, relieved by paroxysms of pain in the head of indefinite seat. Though the pain was excruciating, he welcomed it, as it temporarily dispelled the almost irresistible desire to kill his wife and children or other people. Prior to receiving this injury he was perfectly free from impulses of this kind, and had led a happy life with his family. Behind the angular process of the frontal bone there was a slight osseous depression, which could not account for his symptoms. There was no motor phenomena, but on minute injury it was discovered that immediately after the accident, and for about two weeks subsequently, he suffered from psychical blindness. Physically, he could see, but what he saw conveyed no impression to his mind.

These phenomena, however, gave the key to the hidden lesion in his brain. On operation, the angular gyrus was exposed, and it was found that a portion of the internal table of the skull had been detached from the outer, and had exercised pressure on the posterior portion of the supramarginal convolution, while a corner of it had penetrated and lay imbedded in the anterior portion of the angular gyrus. The bone was removed from the brain, and re-implanted in the proper position, after which he became greatly relieved in his mental state. Though still excitable, he had made no further allusion to his homicidal tendencies, which previously were obtrusive, and was now at work. Such cases of complete mind blindness were rare, and the definite localisation in this case would assist in indicating in man what the anterior portion of the angular gyrus and the posterior portion of the supramarginal convolution subserve. In cerebral surgery not only did we require to localise the lesion, to select suitable cases, but also, after exposing the brain and its lesion, to judge when to advance and when to hold the hand.

He gave other cases showing that lesions can be definitely localised, concluding with a statistical statement of his cerebral cases. Of twenty-one, all cases of brain lesions in which he had operated, three died and eighteen recovered. Of the eighteen who recovered, sixteen are still alive and in good health, and most are at work, leaving two which have since died, one from BRIGHT'S disease, eight years after operation, the other from an acute attack of tubercular enteritis, forty-seven days after operation. He next dealt with operations for the relief of paraplegia caused by pressure on the spinal cord, dealing with six cases in which the posterior arches of the vertebræ had been removed. Dr. MACEWEN emphatically stated: "The spinal membranes and the cord itself could be exposed, and neoplasms and encroachments upon the lumen of the canal might be removed therefrom without unduly hazarding life. Such interference was unsparingly condemned by writers on the subject, their remarks, however, being applied to injuries, as no such operation had been hitherto contemplated in idiopathic cases. They contended that they were full of danger, being difficult, prolonged, and attended by profuse hæmorrhage; secondly, that the operation could hardly benefit the patient; and thirdly, that no one had yet been able to present a successful case. Each of those points had now lost its validity."

His other cases embraced: 1. Case of paraplegia, with incontinence of urine and fæces, due to connective tissue; tumour at seat of angular curvature of spine, completely cured by removal of tumour and laminæ of vertebræ. 2. A second but more aggravated case. 3. Abscess in the posterior mediastinum, evacuated successfully. 4. Compression of the cord from traumatism. 5. Paraplegia from traumatism, cured by elevating connective tissue tumour, and depressed arch of twelfth dorsal vertebræ. "Here, he said, "are six cases in which elevation of the posterior vertebræ has been performed. Such operations are now beginning to be practised by others." There is one point of

his address particularly worth studying. Dr. MACEWEN tells us that osseous defects in the cranial wall remain permanent, surgeons making no effort to fill the gap. Since 1873 MACEWEN has always preserved the bones, re-implanting them, and securing even by mosaic work the osseous covering. MACEWEN'S address has now passed into a matter of history, and will shortly be circulated over the whole civilised world. The question of priority in Brain Surgery is now set at rest.

WHILST medicine is striving to advance and to perfect itself in every way, to complete its instruments, and to bring to bear upon disease everything that can in any way mitigate human suffering, the public on the other hand appear to be less appreciative of the work which is being done, and to be sinking deeper into the mire of credulity. We often hear of the Middle Ages—the supposed dark period when the human intellect was shrouded in ignorance, a fallacy refuted by HUME and MAITLAND—but we venture to say that the Middle Ages could not present us with such ignorance and credulity as are to be found in the present day. We are treated in learned addresses to denunciations of the superstitions of our forefathers, and we smile at the narration of wonderful cures wrought by the aid of charms, and even we scoff at the possibilities of cures wrought by prayer. The African, in the midst of his wilds, worships a fetich, which may be a pebble, a shell, a piece of rag, and all this appears to us very strange. There is some excuse for his superstition. He is ignorant and without light. But what excuse can there be at the present day, when the schoolmaster is abroad, for the superstitious practices, and for the worship of fetiches which prevail, not only amongst the ignorant and uneducated, but even amongst those who have enjoyed the advantages of university education? Let us look at a few of the fetiches of modern life. "Electricity is life." This is one of the favourite phrases by which moderns are brought within the influence of the fetich.

Electricity being life, some pieces of common metal discs are sewn up in a piece of red flannel, and these pieces of flannel are fixed in various parts of the body, and those who wear them actually believe that they can be cured of nearly every disease by means of them. Electricians of the highest repute may assure them that these belts and pieces of flannel contain no electricity, but the purchasers laugh them to scorn. They pay enormous prices for these electropathic appliances; they worship the piece of flannel with all the ardour with which the African worships his shell, bead, or piece of rag. Proof of this is to be seen by referring to the advertisements in the daily papers, where one may read of the faith cures, in the testimonials published by the vendors of this class of amulet. Again, let us look at another appliance even more strange. Nature gives to a certain number of us charming voices, such as that of the tenor, but we are assured that by the use of a certain appliance, and by the aid of a flute-like inhaler, the *timbre* of the voice can be altered so that the Italian opera can

always be supplied with tenors, whose voices will rival SIMS REEVES, MARIO, or GIUGLINI. We have seen this instrument in the hands of a man of education, who had purchased it in consequence of the assurance of some of his friends that they had known of cases in which this instrument had actually produced the effects claimed for it. We are dealing now with one set of contrivances which are largely sold. The superstitions of modern days are as grotesque as those furnished in the most ancient history. We have known men of education wear a skein of silk across the chest to keep off rheumatism. We have seen a small piece of sulphur placed in the boots for the same object. Need we multiply instances of human credulity in this the nineteenth century. Look down the advertisement pages of any of the daily papers and note the promises which are held out, that by such and such methods of treatment disease will be prevented, and death kept at bay. The people purchase these articles. The patent medicine vendor who dispensed a pill of aloes and soft soap, died worth a million of money, by pandering to the credulity of the masses. Human nature appears to be very much the same as it was in the earliest ages, and we are moving round in a circle, the old and the new meeting.

We have just had a meeting of the British Medical Association, at which the best minds in every country assisted, and knowing what we know, we are obliged to confess that certain diseases are at present incurable, and beyond the skill of man, but the charlatan has no such scruples as we have. He proclaims from the vantage point of the daily press that he has a cure for cancer, phthisis, epilepsy, etc., and that the pure profession of medicine know nothing about these diseases. The public, in the face of our positive knowledge, in the face of our anxieties, and our interest to discover a cure for these diseases, accept the unqualified, unsupported declaration of the quack, and they purchase his remedies. It is the old, old story. Can we suggest any remedy? Education is at the present day the panacea for all our ills; but education we fear cannot help us. We presume the clergy in the present age represent all that is best in education, that is to say, they have gone through collegiate courses, and have been at the universities. Experience tells us that amongst the ministers of religion are to be found the staunchest supporters of the various forms of quackery, which, at the present day, flourish in Great Britain, so that we cannot look hopefully to any help from education. We cannot appeal to the law with any prospect of success, because we are so tender of our liberties that we actually allow human lives to be trifled with at the hands of lying impostors, who, under false pretences, take money from the public. The cry is raised that the profession wants protection, and that class interest is at the root of our objection to the cancer curers, the epileptic curers, and the like. MACEWEN'S address in Glasgow has revealed to us the possibilities of modern surgery, and shown us how powerless medicine is to relieve certain troubles of the brain, and how difficult diagnosis is. To the quack

diagnosis is easy, and he would have no hesitation in supplying medicine to one of MACEWEN'S cases, and would even give a positive assurance that his remedy would effect a cure. What shall we say of the state of mind of some of the people who send testimonials that they have been cured of incurable disease by the use of such and such remedies? We can only fall back upon the explanation which holds true of the African. They are ignorant and superstitious, and, in modern times, they still worship a fetich. If credulity be the test, the Middle Ages are not yet over.

Annotations.

"Forsan et hæc olim meminisse juvabit."

A MINISTER OF PUBLIC HEALTH.

IN this paper, read at Glasgow Meeting of the Brit. Med. Association, the author, Mr. Brindley James, President of the West Kent Medico-Chirurgical Society, pointed out the necessity created by the modern prevalence of more enlightened views on the all-important subject of public health, for the establishment of an eminent public functionary, empowered by the State to form, *pro bono publico*, and superintend with unceasing vigilance, a system of medical police based on the principles which have suggested some such rudimentary organisation in America and the French system of hospital appointments and general management, the satisfactory working of which is unquestionable. At the same time he dealt ably with the knotty point of "Pounds, Shillings and Pence," in connection with such a scheme, demonstrating the true economy the nation will essentially recognize in its adoption, as also the happy solution it doubtless will find therein, to the puzzling problem of hospital relief and the line to be drawn at its gratuitous dispensation.

THE CONGRESS OF AMERICAN PHYSICIANS AND SURGEONS.

THE Committee of Arrangements announces to the members and invited guests of the special societies taking part in the congress that the arrangements are sufficiently advanced to assure the success of the first triennial session of the Congress of American Physicians and Surgeons, which will be held in Washington, on the 18th, 19th, and 20th of September. A number of distinguished physicians and surgeons have signified their acceptance of the invitation to attend. Places of meeting for the congress and each of the societies have been secured, conveniently located, so that members may interchange attendance without annoyance. The meetings of the congress will be held in the evenings, beginning at eight o'clock; on the evenings of the 18th and 19th the meetings will be held in the main hall of the Grand Army Building, 1412 and 1414 Pennsylvania Avenue, and on the last (Thursday) evening in the hall of the National Museum. During that evening the Army Medical Museum and Library building, alongside of the Museum building, will be lighted and opened for the inspection of the members and invited guests. The meetings of the societies will be

held during the day, according to the programme each may respectively provide. The sessions will be open to the profession. On Monday evening, September 17th, a dinner will be given by members of the congress to the guests of the participating societies. Invitations to this dinner will be sent only to the specially invited guests who have indicated their acceptance. The contributing members will receive cards of admission. It will be limited exclusively to members of the congress and invited guests. An informal collation will be served at Willard's Hotel on Tuesday evening, after the adjournment of the meeting of the congress, to the guests and those members who may choose to attend. A similar entertainment will be served in the National Museum building on Thursday night, after the final adjournment of the congress. Guests are requested to notify the chairman of the Committee of Arrangements immediately after their arrival in Washington, giving their address and stating whether they have ladies with them. Special arrangements will be made for the entertainment of the wives and daughters of the guests. Hotel accommodations are ample, and conveniently located to the places of meeting. The secretaries of the special societies are requested to forward to the chairman the names and addresses of their foreign guests. Members of the congress and the guests are expected to register. A parlour in Willard's Hotel will be provided for that purpose, from which the mail of the members and guests will be distributed, and at which the city residence of each member or guests can be ascertained. All communications should be addressed to the chairman of the Committee of Arrangements, Dr. Samuel C. Busey, 1545 I Street, N. W., Washington.

THE EXPENSES OF INTERNATIONAL MEDICAL CONGRESSES.

INTERNATIONAL medical congresses are very expensive. We learn from the *Medical News*, Philadelphia, that Dr. Ewald has been estimating the relative cost of the Amsterdam, London, Copenhagen, and the Washington congresses, and that the cost stands in order, as follows :

	Members.	Cost.
Amsterdam	630	577,500 dollars.
London.....	3,181	4,369,500 ..
Copenhagen.....	1,400	1,836,250 ..
Washington	2,500	5,412,500 ..

The Washington Congress would not have been so expensive had the profession pulled together.

CHARGES AGAINST MEDICAL MEN.

THE lay papers are but too ready to publish charges against medical men. It is a serious matter for a practitioner to have his name printed in the police news. He may have an answer to the charge, but though innocent, he is in a certain manner tarnished. Many people may read of the charge, but the same readers may not see the defence. We should leave to the lay papers the privilege of publishing these charges. When a medical man is pronounced guilty, then we may perhaps point a moral, but even then silence is golden.

GRADUATION CEREMONY AT GLASGOW UNIVERSITY.

At the graduation which ceremony took place in the Bute Hall, the Vice-Chancellor, Principal Caird, presided, and opened and closed the proceedings with the usual Latin prayer. Professor Robertson presented the following gentlemen, who received the honorary degree of LL.D.:—Sir William Aitken, M.D., F.R.S., Netley; Thomas Clifford Allbutt, M.D., F.R.S., Leeds; Professor Ball, Paris; John T. Banks, M.D., D.Sc., Dublin; Dr. Fordyce Barker, New York; Professor Benedikt, Vienna; Thomas Bridgwater, M.B., M.R.C.S. Eng., Harrow; John Macintyre, M.D., Odiham, Hants; Inspector-General Maclean, M.D., C.B., Netley; James Morton, M.D., President of Faculty of Physicians and Surgeons, Glasgow; Surgeon-General Munro, M.D., C.B., London; Frederick William Pavy, M.D., F.R.S., London; Sir George H. Porter, M.D., Dublin; David Yellowlees, M.D., Royal Asylum, Gartnavel, Glasgow.

AN ELECTRIC BONE CUTTER.

REMOVAL of sections of bone in surgical operations has heretofore been a long, tedious process, effected with a mallet, chisel, gouges, etc. It is, perhaps, the most brutal and unscientific method which could be adopted, and sounds like the operative butchery which existed in the last century. According to the *Electrical Engineer*, August 3rd, 1888, this has all been reformed by an invention called the electric osteotome, which is an instrument holding a circular saw at its extremity, revolved with lightning speed by an electric motor. This, when held against a bone, makes a clean cut through it in a few seconds; in fact, its action is instantaneous. By holding the osteotome in a slanting position, wedge-shaped pieces can be cut out with equal promptitude. There is no danger of the saw cutting the soft parts, as they are protected by a retractor, an instrument which is passed down and under the bone.

THE ENCAMPMENT OF THE 2ND V.B. NORTH STAFFORDSHIRE REGIMENT IN HAGLEY PARK.

DURING the above encampment, the Midland Volunteer Medical Association held its third annual field day. A bearer company was organised consisting of detachments as follows:—2nd V.B. North Staffordshire Regiment, Surg.-Major Morgan, Sur. Lowe, Sur. Faussett, 2 non-commissioned officers, and 11 men; 2nd V.B. South Staffordshire Regiment, Surg. Wilson, 1 non-commissioned officer, 10 men, 2 buglers, and an ambulance waggon; 1st V.B. Royal Warwickshire Regiment, Surg. Freer, 1 non-commissioned officer, 11 men, 2 buglers, and an ambulance waggon; 1st V.B. Derbyshire Regiment, Surg. Gentles, 2 non-commissioned officers, 22 men, and 1 bugler; 4th V.B. Nottinghamshire Regiment, Surg. Appleby, 1 non-commissioned officer, 10 men, and 1 bugler; 2nd V.B. King's Own Shropshire Light Infantry, Acting-Surg. Hollies, 1 non-commissioned officer, 4 men, and 1 bugler. In addition to these, there were also present, with the Ambulance Company, Surg.-Major Francis (4th Regimental District) and Surg. Phillips, of the

1st V.B. North Staffordshire Regiment. Before commencing manœuvres a meeting of the Association was held. The business of the meeting was to receive the report of the deputation to the Volunteer Medical Association and to discuss the Royal Warrant for Medical Reserve. After a good deal of discussion affiliation with the Volunteer Medical Association was recommended, provided satisfactory terms of subscription could be arranged with the council of that body. With regard to the second question on the agenda, it was resolved that "*Taking into consideration the anomalous position of the Volunteer Medical Service and also that the Royal Warrant might be used as a lever to dictate terms to our comrades of the Medical Staff, without wishing to interfere with individual action, this association does not at present recommend it members to join the Army Medical Reserve.*"

New Remedies.

Some experiments have recently been made on the antiseptic properties of mercuric oxycyanide and cyanide as compared with those of the perchloride. These experiments show that solutions of the oxycyanide precipitate albumen very slightly, and have only a slight alkaline reaction. A solution of 1 part in 1,500 is well tolerated by the mucous membrane and by wounds, being less irritating to the tissues than the perchloride. The solution is also less absorbed by the tissues, and if made of the above strength does not seriously affect the metals of which surgical instruments are made. When added to a peptonised broth, the antiseptic power of the oxycyanide was shown to be six times greater than that of the perchloride, a solution of 1 part of the oxycyanide in 12,000 preserving the broth as well as a solution of 1 part in 2,000 of the perchloride. In its effect on *Micrococcus aureus* it showed only a slight advantage over the perchloride, and the cyanide appeared to be even less active than the oxycyanide. Salicylate of mercury has been found to resemble the albuminate in its solubility in solution of chloride of sodium, and has also been recommended for use in the antiseptic treatment of wounds.

A substance, named iso-apiol, has been obtained by Messrs. Ciamician and Silber by heating apiol, the so-called parsley camphor, with alcoholic potash. It has a higher melting-point than apiol (55-56°), and is soluble in ether, acetic ether, acetone, benzol, hot alcohol, and glacial acetic acid, but is insoluble in water, alkalies, and carbonated alkalies. Iso-apiol has been tested physiologically and therapeutically in the Padua clinic, and is reported to exercise a pronounced influence on the vasomotor system. Small doses of 0.2-0.4 grammes, given internally, produced excitement of the heart with powerful pulse; in the course of half-an-hour larger doses (0.6 to 0.8 gramme) were followed by a rebounding pulse, the effects continuing for several days after the drug had been given for several days and then discontinued. It produces, like apiol, headache and passing intoxication, and when repeatedly given causes digestive disturbances, loss of appetite, and even fever.

Lanessin is the name given to a new preparation of wool fat, which is made by a process slightly differing from that used in the preparation of lanolin. The precipitate obtained from the wool-washing liquor by lime is purified, whilst still in a pasty and alkaline condition, by the use of alkaline oxidising agents, such as the manganates or permanganates, or chloride of lime. A pure neutral wool fat is then extracted from the product by the use of suitable solvents. This neutral fat, which consists of cholesterol, isocholesterol, etc., is then diluted in consistence for the purposes of pharmacy by adding the methyl or ethyl ethers of oleic or ricinoleic acids instead of vaseline. According to some researches made by Messrs. Gautier and Mourgues cod-liver oil yields, besides choline, several other bases of considerable physiological activity, and which may play an important part in the therapeutical action of this remedy. A mixture of these bases is obtained by treating the oil with an equal volume of 33 per cent. alcohol, containing four grammes of oxalic acid

per litre, the liquid so obtained being neutralised with lime, filtered, and distilled *in vacuo*. After allowing the distillate to stand over precipitated carbonate of lime, and evaporating the resulting neutral liquor to dryness in a vacuum, the residue is taken up with hot alcohol, the solution distilled, and the residue taken up with a little water and saturated with caustic potash. The alkaloids are then removed from the liquor by exhaustion with ether, from which they are precipitated by the addition of oxalic acid. The oxalates of the alkaloids on decomposition with potash yield a thick brown oil, amounting to about 0.35 to 0.50 gramme, of the dry mixed alkaloids from a kilogramme of the oil. By means of fractional distillation the alkaloids were separated, and were found to consist of butylamine, amylamine, hexylamine, hydrolutidine, a new base coming over between 198° and 200°; aselline, a new fixed base giving a hydrochlorate precipitating immediately in the cold; and morrhaine, another new fixed base giving a rather soluble chloroplatinate, which crystallizes from the mother liquor of the preceding. Another alkaloid giving crystallizable chloroplatinate, a peculiar nitrogen acid, named gadminic acid, and a little lecithin were also detected.

The value of tannin in phthisis has been confirmed by Professor Cecherelli. He states that it not only possesses antifermentative properties, but that he has come to the conclusion, after watching the action of the compound in several cases of tubercular disease, that it not only arrests the development of tubercle, but also destroys the tubercular centres, and that in this respect it is superior to iodoform.

Tannin has been also employed by Dr. H. Boulland with success in dilatation of the stomach. In cases where constipation is present it was found that if ten centigrammes instead of twenty were given, the regularity of the bowels was not interfered with. It also diminishes mucous secretion, rendering digestion less painful.

Iodoform is recommended by Messrs. Chauvin and Jorissen as a powerful, reliable, and rapid hæmostatic. They administer it in pills, containing one grain of iodoform, made up with extract of gentian or liquorice, of which three to five are taken daily.

It has been pointed out by M. Petit that the oil of the Soy bean (*Soja hispida*) possesses energetic purgative properties. This oil is readily obtained from China, and might be worth trial as a substitute for castor oil in cases where the thick consistence and disagreeable taste of the latter is a serious objection.

A curious substance is cultivated near Cuneo, in Piedmont, for curative purposes, under the name of "muffe"—i.e., mould. It occurs as a scum on the surface of hot springs, more or less impregnated with sulphuretted hydrogen, and having a temperature from 59° to 60° C. It consists, according to the investigation of Professor E. Perroncito and Dr. E. Varalda, of a dense felt of algal filaments, which are chiefly composed of *Leptothrix valderia*, but contains also filaments of an *Oscillaria* and cells of a *Glaucocapsa* interspersed among it. This alga is cultivated on the surface of wet inclined rocks at an establishment in the neighbourhood of the springs of St. Martino and St. Lorenzo, where a speciality is made of the cultivation and export of the substance.

An examination of the local weed (*Astragalus mollissimus*) has been made by M. J. Kennedy, who found in it a volatile acid, but did not succeed in determining to what principle or principles the toxic action of the plant is due. The character of the experiments made, however, still leaves open the question of the physiological action of the plant on other animals than cattle.

Dr. J. J. Pitcairn speaks highly of the value of hyoscine as a hypnotic, in the *British Medical Journal* (July 14th, p. 75). He finds that its action is certain, and is only contra-indicated in pulmonary diseases. It causes no digestive disturbance, being in this respect far superior to morphine. It does not seem to have any special idiosyncrasy, but toleration renders a previous effectual dose inert on repetition. If more than one dose is likely to be required, it is best to begin with $\frac{1}{150}$ grain, increasing by $\frac{1}{150}$ to $\frac{1}{75}$ grain. In case of any unpleasant symptoms caused by an overdose, pilocarpine, or preferably sodio salicylate of caffeine, is indicated.

The composition of *strophanthine* has been investigated by M. Arnaud, who finds that its formula should be $C_{31}H_{48}O_{12}$, so that it is a close homologue of Wabain $C_{30}H_{46}O_{12}$, the active principle of the Wabaio plant use by the Somalis.

Periscope.

I.—GLEANINGS IN MEDICINE.

By W. B. KESTEVEN, M.D.

Hæmorrhage of the Mouth in a Child aged Nine Days. By Dr. Menger (*Archives of Pediatrics*, June, 1888. From *Daniels's Texas Med. Jour.*, August, 1887).—The writer records a case of fatal hæmorrhage from the mouth in a child nine days old. At the autopsy numerous ecchymoses and petechiæ were seen on the body. The mucous lining of the mouth was covered in different places with a mass of granular, curdy substance, of brownish colour, protruding more or less, and firmly adherent to the mucous membrane. The tongue was covered with a thick, red-brown, and bloody substance, of spongy appearance, covering nearly the entire surface of the organ. The œsophagus showed numerous nodulated protuberances, caused from deposits of the oidium albicans; otherwise the œsophagus and pharynx were normal. The internal organs were congested. Microscopical examination of the covering of the tongue showed a red-brown body, consisting mainly of epithelial elements, impregnated with blood-corpuscles and a whitish body of granulated amorphous appearance, consisting chiefly of elastic tissue, epithelium, and large quantities of the oidium albicans. The author thinks this was a case of hæmatophilia. The mother stated that she had rubbed the child's tongue with a cloth saturated in salvia tea, in order to remove the thrush, after which a bleeding was noticed.

On the Use of Lanolin and Boracic Acid in diseases of the Skin in Children. By Dr. Sturges (*Archives of Pediatrics*, Philadelphia, June, 1888).—The author has been much pleased with the use of lanolin. The cases in which he has found it of most value are: facial eczema squamosum, eczema rubrum and intertrigo, the mild form of seborrhœa often seen on the temple and about the chin, and, lastly, chronic urticaria. In eczema of the face and head he directs that the parts be cleaned of crust in the usual way. Should the exposed surface be weeping copiously, he prescribes boracic acid in very fine powder to be dusted on for first forty-eight hours, and not to be washed off. The first effect of this is to increase the serous flow, but afterwards to diminish it. After forty-eight hours boracic acid is to be applied twice daily, washing off each time the acid applied the time before. As soon as the skin is in condition to bear an ointment, he uses boracic acid, 3 ii; lanolin, 3 i. In eczema squamosum, in which there is considerable induration with scaly surface, he uses five to fifteen grains salicylic acid to the ounce of lanolin, according to the degree of induration, rubbing it briskly into the skin. In chronic urticaria he thinks we have in lanolin a reliable application to alleviate the itching, usually so difficult to control. In eczema rubrum and intertrigo he employs finely-powdered boracic acid, dusted over the parts night and morning, and washed about the genitals, whenever the napkins are changed.

The Left Renal Vein and Vena Cava, acting as Supplementary to the Portal Circulation. By Dr. Lejars (*Le Progrès Médical*, June 23rd).—Cirrhosis of the liver develops three principal points of anastomosis between the portal system and the vena cava. These Dr. Lejars points out: (1) Accessory portal veins, in the suspensory ligament, and in the traces of the umbilical vein, forming a net work beneath the abdominal integuments, through which the blood flows backwards into the iliac veins; (2) the œsophageal veins joining the gastric coronary; (3) the hæmorrhoidal veins. Besides these constant anastomoses, there are others less known, but which, in certain cases of abnormal development, may obliterate the others. Schmiedel points out communication of the hæmorrhoidal with the vesical veins; the phrenic and the pyloric, the vena with the vena cava inferior, behind the liver; of the vena porta with the iliac. The same observer notes communications between the veins of the mesentery with the left renal vein, and anastomoses on the posterior surface of the abdominal walls from the veins of the colon. Injection of the veins was performed on the body of a subject set aside for dissection, in which sclerosis of the liver was much advanced. The spleen was gorged with blood, the accessory portal veins and the network of veins are the posterior. Surface of the abdominal walls appeared to be obliterated. The sclerosis prevented the free circulation in the liver, and yet neither the accessory portal, nor the œsophageal, nor the abdominal, nor hæmorrhoidal veins, were dilated. No ascites was present, but the supplementary circulation was effected by the splenic distending that organ, and from this reservoir passing by venous anastomoses through the renal system, and thence by the vena cava inferior.

Contagion of Leprosy (*Gazette Hebdomadaire des Sciences Médicales de Bordeaux*, June 24th, 1888).—At the *Académie de Médecine* a long discussion took place on the contagiousness of leprosy. M. Vidal considers that leprosy is not propagated by heredity, nor by local condi-

tions, but simply from one person to another. Among the proofs of its contagiousness he enumerates: (1) Its parasitic nature; (2) the well supported facts of its transmission from a leprous to a healthy individual; (3) the course of epidemics of leprosy, and the possibility of arresting them by careful prophylaxis. M. Vidal urged the isolation of lepers. M. Leroy de Mirecourt read a letter from a M. Zambacco, of Constantinople, who expressed himself very strongly as an anti-contagionist. M. Comil opposed the conclusions of M. Zambacco, but admitted that the existence of a parasite was not sufficient proof of contagion. M. Comil further urged that we are yet ignorant of the biological history of the bacillus of lepra. The period of incubation of lepra is sometimes so long that an intercurrent disease may prove fatal before the leprosy can have manifested itself. Many cases of heredity, M. Cormil remarked, might be referred to contagion.

On the Sensibility of the Internal Surface of the Uterus (*Le Progrès Médical*, June 23rd).—M. Berger, at the *Société de Chirurgie*, stated his opinion that the internal surface of the uterus, whether empty or pregnant, is absolutely insensible to direct contact of mechanical agents, provided that they do no violence thereto nor cause any movement of the organ. M. Terrier maintained that the uterus is so far sensitive that catheterism of the uterus causes much suffering. M. Boucilly observed that the cervix is sensitive in its vaginal portion, that beyond this it is only sensitive under influence of the mucous membrane. M. Quéna considered that the sensibility is so slight that it would be possible to introduce a catheter without it being perceived by the women. From the experience of other speakers it was obvious that the variability of the sensibility of the uterus furnishes a key to the diversity of opinion upon the question.

Trephining among the Kabyles (*Progrès Médical*, June 23rd).—M. Lucas-Championnière related, at the *Société de Chirurgie*, twenty cases of trephining, in which five were for accidents, and the fifteen for medical reasons. This operation is highly esteemed among the Kabyles, not only for traumatic lesions, but also for medical cases. Of the fifteen cases on which M. Championnière had operated, six were for local pains that rendered life of the sufferers intolerable, of these three were cured, the others relieved, and these might have derived still greater benefit had the operation been had recourse to earlier, before secondary degenerations had supervened. Trephining was practised four times for epilepsy, indeed among these savage tribes epilepsy is the principal indication of trephining. In one case the result was very remarkable, in others a notable amendment followed. These results M. Championnière considers to be most encouraging.

Solanine: its Action (*Le Progrès Médical*, July 7th, 1888).—This alkaloid, which was employed first as an anæsthetic in the year 1886, has been, with great advantage, experimentally exhibited in a case of cerebral sclerosis, by MM. Grasset and Sarda, who sought to ascertain its influence over certain exito-motor phenomena (especially in epileptoid tremors). This remedy has been only recently used in nervous disorders, and indeed has scarcely yet acquired a therapeutic position. An Italian physician (Capparoni) has found it to be a useful anæsthetic, and of service in affections manifesting reflex-motor action. Dr. Fiore, in 1887, devoted attention to the study of this medicine. The following are among his conclusions: 1. Solanine has a central action; it narcotises the medulla and cord, thereby producing anæsthesia and paralysis. 2. It moderates reflex movements. 3. The brain is but slightly susceptible to its influence. 4. It may be administered in full and successive doses (0.30—0.40 centigr.) without inconvenience to the patient. 5. In all diseases marked by excitement, spasm, or pain, solanine is of great service.—The following is the statement of the properties of solanine, alkaloid of Dulcamara, as given by Dr. Lauder Brunton (*"Pharmacology,"* 1887, p. 983). "Solanine, in both warm and cold blooded animals, paralyses the central nervous system without affecting the peripheral nerves or voluntary muscles. It slows the heart and respiration; lessens sensibility, and causes death with convulsions. In warm blooded animals there is constant fall of temperature, and there is entire absence of any action on the pupil. In man it produces weakness, laboured breathing, nausea, vomiting, and drowsiness, but no true sleep. The pupil is unaffected, and there is no increased movement of the bowels, diuresis or diaphoresis.

Le Nœud Vital (*Le Progrès Médical*, July 7th, 1888).—At the sitting of the *Société de Biologie*, June 30th, under the presidency of M. Brown-Sequard, M. Paul Loze stated that he had made observations upon decapitated animals, from which he drew the conclusion that the much discussed *nœud vital* has no real existence. In man, death follows by asphyxia; on the contrary, in dogs, death occurs from inhibition without convulsions. The same phenomena take place where the medulla oblongata is divided, as in man when the spinal cord is severed. The *nœud vital* will in the latter be in all the upper part of the cord—

in fact has no special existence. M. Dastre confirmed the observations of M. Loze, and stated his opinion that a *naud vital* is simply an inhibitory centre, and not a centre of respiratory movements.

Suture of the Cornea (*Le Progrès Médical*, July 7th, 1888).—At the Société d'Ophthalmologie de Paris M. Gillet de Grandmont related the case of a young girl whose left eye was struck by a triangular stone. The lens and vitreous body were discharged so that vision was destroyed. On examination under chloroform, portions of the cornea were seen everted. These were brought together by antiseptic stitches, and cicatrization was obtained. The globe was doubtless diminished one-third, and the iris adherent to a central leucoma, but the deformity was minimised and disfigurement obviated.

Statistics of General Paralysis among Females. By Dr. Siemmerling, Berlin (*Le Progrès Médical*, July 14th, 1888).—The proportion of women to men suffering under general paralysis, admitted into *La Charité* from 1880 to 1886, was one to three. The age in women most obnoxious to this malady is between thirty-six and forty years. The greatest proportion of these were married women. Amongst the unmarried, prostitutes were in number about six per cent. The causes observed by Dr. Siemmerling most conducive to the disorder, appear, in this last class, to be their unfavourable social conditions, after which were syphilis and hereditary tendency. In a clinical point of view the author had directed special attention to the fixity of the pupil, and the state of knee reflex. The first was present in sixty-four per cent. of the cases; knee reflex was augmented in thirty-four per cent. The course of the disease is observed to be, generally, calmer than in men. In thirty-four cases, histories could be obtained of the malady extending over from two to five years.

Hay Fever as a Disease of Central Nervous Origin. By Dr. P. O. Kinneard (*Medical Record*, New York, July 14th, 1888).—Dr. Kinneard enters at considerable length upon the consideration of the physiology and pathology of nervous centres, especially upon their conditions under excitants, which, as he points out, induce a changed condition of the terminal distribution of the nerves in the skin and mucous membranes. A large supply of blood causing excessive circulation in the centres, induces, Dr. Kinneard urges, excessive nutrition in the terminal nerves. The treatment of hay fever based upon the hypothesis of hyperæmia of the nerve centres, he has found to be most successful. Chapman's lumbo-dorsal ice bags, by causing dilatation of the arterioles throughout the body, cause a more even distribution of the blood, withdrawing excess from the extreme vessels, and repressing the vehemence of the currents proceeding to the glandular nerve cells. Acting upon this hypothesis, Dr. Kinneard states that he has met with the greatest success in the treatment of asthma, as well as of hay fever.

A Floating Liver and Movable Spleen. By M. Goundobine, Moscow (*Le Progrès Médical*, July 14th, 1888).—A youth, æt. fourteen years, an apprentice to a carpenter, suffered pain in the right hypochondrium so severe as to interfere with his work. This pain dated a year back. Two years previously he had suffered from intermittent fever, which was followed by jaundice. Six months subsequently tumours were observable in both hypochondria, not painful, and easily moved. Within the last twelve months the right tumour had become permanent and painful. During the last six months he had been subject to attacks of urticaria, with intolerable itching. Nothing noteworthy was ascertained as to heredity. The thoracic organs were healthy. In the digestive organs dyspepsia was present, with constipation and tympanitis. By percussion the limits of the liver could be described; above, it reached as far as the eighth rib, and downwards, as low as the eleventh intercostal space; towards the left side it reached the middle line. By palpation a tumour could be felt having exactly the shape and consistency of the liver, with a smooth surface and rounded borders, and a fissure anteriorly. Palpation excited pains which radiated towards the epigastrium. The spleen did not appear to be enlarged; dulness on percussion extended to the ninth rib; the organ could be felt, the patient making deep expirations. The diagnosis in this case was borne out by the treatment, which consisted in applying an elastic band round the abdomen, with a pad placed over the liver. In one month the pain had completely disappeared, while both organs had almost resumed their normal limits.

II.—NOTES FROM FRENCH JOURNALS.

By H. R. HATHERLY, M.R.C.S.

Treatment of Diarrhoea (*L'Union Médicale*).—Dr. Debove has utilised, in the treatment of chronic diarrhoea, when of a very obstinate character, an inert powder in large doses. He prefers powdered talc or silicate of magnesia, because it is not altered by the digestive secretions, and in very fine powder it is not irritating; 200 grammes a day (about

six and a half ounces) is sufficient, suspended in milk, which should be well shaken before taken. He has given as much as 400 and 600 grammes during the day. Amongst consumptives suffering from diarrhoea, from three to five months, he has succeeded in establishing obstinate constipation. The diarrhoea of consumptives is necessarily relapsing since it is kept up by intestinal ulcerations. The remedy should be continued in moderate doses. Not only does talc arrest diarrhoea, but it allows the administration of substances which could not otherwise be tolerated, milk and even oil of which in certain cases patients have been able to take as much as 500 grammes a day. Dr. Debove has not tried the treatment of summer, or of infantile diarrhoea, by talc. The obstinate constipation which succeeds the diarrhoea does not cause any inconvenience to tuberculous patients, inasmuch as the organic lesions are sure to cause a return of the diarrhoea if the remedy is discontinued. One day after leaving off the talc, the motions cease to be white. The talc is so light that it never lodges in the dilated intestines, the slightest peristaltic action causing its movement.

Treatment of Herpetic Keratitis (*L'Union Médicale*).—Dr. Durruty advises in the first instance a saline purgative, or an emetic; then to subdue the fever (especially the paludal form), and to relieve pain, he prescribes from forty to 50 centigrammes of the sulphate or bromo-hydrate of quinine each day. The local treatment varies with the many varieties and phases of the disease. If ocular inflammation is very acute, and above all, if there is iritis, two or three leeches should be applied to the temple, and a drop of the following solution should be applied two or three times a day: neutral sulphate of atropine two to five centigrammes, distilled water ten grammes. With aged patients the atropine should be alternated with eserine lest glaucomatous tension be provoked. If the pain is very great, and photophobia is intense, the chloro-hydrate of cocaine should be substituted for, or combined with, the atropine; they may be combined thus: neutral sulphate of atropine two centigrammes, chloro-hydrate of cocaine twenty-five centigrammes, distilled water ten grammes. A bandage should be applied over the eye to obviate the friction of the eyelids against the herpetic vesicles.

Uterine Hæmorrhage (*L'Union Médicale*).—Dr. Lutaud advises the following powder:

Pure tannic acid,	Lycopodium, of each	10 grammes.	} Mix.
Iodoform.....	2	"	

Small tampons of absorbent wool, gauze, or other material, should be well dusted with the above powder, and introduced into the vagina. The antiseptic properties of iodoform allow the tampons to remain for forty-eight hours without producing any inconvenience.

Treatment of Blennorrhagia (*L'Union Médicale*).—Dr. Gillebert Dhercourt has read a paper before the Medical Society of Paris on the treatment of blennorrhagia. Successive discoveries in bacteriology have not modified the treatment of all the diseases due to microbes to the same extent. It is only natural that at first the more serious diseases, in which life is at stake, should receive the most attention; but diseases of a less serious character should not, on that account, be neglected, if they can be shown to be curable by antiseptic methods. He agrees with those who admit the existence of a pathogenic gonococcus. Holding this opinion, he has discarded all the old fashioned remedies, and has sought a substance capable of acting directly on the urethral mucous membrane, and of destroying micro-organisms without injuring the membrane. Having learned from German sources that the salts of thallin were very efficacious, he was led to the administration of tartrate thallin, dissolved in naphthol, one in fifty, or one in a hundred, according to the severity of the attack. Three injections of half, or a third, of a syringe full of this solution must be used daily, with the usual precautions. By this plan of treatment he has obtained the following results in acute blennorrhagia: 1. The relief of all pain in micturition after the second day, and sometimes even after the second injection. 2. Rapid diminution, and afterwards suppression of the discharge from the fourth to the sixth day. This rapid action may appear strange, but he adds that each time a patient discontinues the injections immediately the discharge has ceased, a relapse has followed. It is therefore necessary to caution the patient as to this probable disappointment, and to induce him to persevere in the treatment for four or five days after apparent cure. He has followed this plan of treatment in forty cases of blennorrhagia with complete success. The treatment may be adopted from the earliest stage, and is a great improvement on the old plan of encouraging the discharge, before proceeding to arrest, which he considers a true cultivation. In cases of long standing the treatment is neither better nor worse than the usual methods.

Gastric Ulcer (*L'Union Médicale*).—The numerous obscurities which still surround the origin of simple ulcer of the stomach and of the duodenum are day by day receiving light. The theory of vascular thrombosis, sanguineous and lymphatic, has received additional con-

firmation from the communication of Dr. Letulle to the Academy of Sciences. In certain infectious diseases, pathogenic microbes, circulating in the vascular system, may become arrested in the gastro-duodenal mucous membrane, and there form colonies, which obliterate the small vessels. Then, as happens in simple ulcers due to thrombosis, the acid gastric juice softens the anæmic spot, and then digests it.

Obstetric Operations under Water (*L'Union Médicale*).—Dr. Kaschkaroff, of Yaroslaw, considers that from a practical point of view, air is more difficult to disinfect than water; and that the sublimated spray is a feeble safeguard, and also requiring much time. He has therefore constructed an apparatus in which a current of water constantly renewed is maintained at the same level. The water must be sterilised by the addition of disinfectants. The lower part of the body and the sexual organs are placed in the apparatus, and the entire operation, for instance, craniotomy, may be performed under water, the air having no access. Dr. Kaschkaroff remarks that the idea of performing surgical operations under water, atmospheric air being excluded is somewhat ancient. Thus the English accoucheur, Aitken, in 1786, advised that Cæsarian section should be performed under water, and believed that under such conditions the operation would present fewer dangers, and better results might be anticipated. He performed the operation whilst the patient was in a warm bath. In 1848, Mayer, of Lausanne, proposed the same operation. The apparatus is not described.

Phenate of Camphor (*Gazette Hebdomadaire*).—This is a solution of camphor in phenic acid, in the proportion of one to three, the oleaginous and fragrant liquid which is formed may be mixed with an equal part of some oily vehicle, and may be applied to boils, pruritus vulvæ, and herpes. Subcutaneous injection of phenate of camphor produces local anæsthesia. For internal administration the dose is from five to ten drops, and is best given in capsules.

On Retroflexion of the Uterus (*Journal de Médecine*).—Professor Schultz of Jena. Retroflexion is most frequently due to a relaxation of the appendages and ligaments of the uterus. So long as attempts to give strength to these elements fail, a resort to pessaries becomes necessary, in order that the womb may be fixed in a better position. This treatment yields better results than are usually admitted, judging by those obtained in the *clinique* of Professor Schultz. It happens often that pessaries are badly selected, also that it is impossible to replace the uterus on account of sub-peritoneal cicatrices or perimetritic adhesions which render it immovable. In such cases Dr. Schultz administers an anæsthetic, and adopts rectal, vaginal, and vesical taxis, by which means he often succeeds in raising the womb. But in cases where the adhesions are very firm, and to risk tearing them might prove dangerous, dilatation or stretching should be gradually applied, and repeated attempts to replace the organ, combined with massage will produce excellent results. Massage is chiefly applicable to those cases in which adhesions are thin and cord-like. The two methods (stretching and massage) ought in many cases to be employed simultaneously. In all cases it is right to make a very accurate diagnosis, and so take into consideration the etiology of the disease. Dr. Schultz has witnessed adhesions disappear in a good many cases, and has succeeded in replacing the womb by these methods. It is useful to ascertain the exact site of any adhesions. In some cases treatment by pessaries does not suffice; this is often due to a short and weak anterior vaginal wall, which does not uphold the pessary. In such cases resort may be had to Alexander's operation, which however does not seem to have been attended by very brilliant results, or to laparotomy and the fixing of the womb to the abdominal wall. This last method gives good results, and is perhaps adopted more often than is really necessary. Professor Schultz only approves of it when all other means, including massage, have been tried.

Treatment of Uterine Fibroma by Hydrastis Canadensis (*Journal de Médecine*).—Dr. Lutand has employed an alcoholic tincture of hydrastis canadensis, in doses of from thirty to forty drops daily, in fifteen cases of fibro-myoma. The treatment has been extended over periods varying from two to fifteen months. In seven cases he obtained a sensible reduction in the size of the tumour and the arrest of hæmorrhage; in five cases hæmorrhage diminished without reduction in the volume of the tumour; in three cases there was no improvement. He concludes that hydrastis canadensis has as powerful an action over uterine contraction as ergotine.

Prepared Wool for Burns (*L'Union Médicale*).—Dr. Eller recommends the following formula:—

Two per cent. solution of cocaine	30 grammes.
Boric acid	2 "
Glycerine	4 "
Phenic acid ..	1 "
Absorbent wool.....	30 "

It is alleged to relieve the pain of burns, and to prevent inflammation,

Naphthol in Purulent Ophthalmia (*L'Union Médicale*).—Dr. Valude reports favourably on the value of a weak solution of naphthol used as a lotion in the purulent ophthalmia of newly-born children; also in gonorrhœal ophthalmia, and in sluggish scrofulous ophthalmia. Its effects are twofold: (1) It forms a convenient antiseptic wash; and (2) it brings about a rapid diminution of the swelling of the eyelids, which is so often a very troublesome complication of these diseases. It has not proved capable of exercising any marked influence over the purulent discharge, and must therefore be only looked upon as a useful adjunct to other treatment. The strength of the solution should be 1 in 5,000.

Gastrotomy for Stricture of Œsophagus, caused by Cancer (*L'Union Médicale*).—M. Nicaise has recently performed gastrotomy on a man, aged seventy-five, who had suffered from cancer of the œsophagus for about eighteen months. He was, when he sought relief, in a very feeble condition and very emaciated, unable to leave his bed, and having the complexion and cachexia of a cancer patient. Alimentation had become impossible, and death was imminent. The operation was proposed and at once agreed to. The stomach was found to be deeply situated, small, and contracted; it was fixed to the side temporarily with pins, and afterwards by means of silk sutures, which were left in the wound. M. Nicaise then made a small opening with a bistoury to admit the insertion of a red rubber tube (No. 20 Charrière). The mucous membrane was then sutured to the abdominal wall. Feeding commenced the day of the operation. At first very small, but frequent injections were made; and subsequently larger quantities were injected at longer intervals. The nutriment consisted of broth, champagne, eau de Vichy, then yolks of eggs, milk, claret, peptones, meat juice, minced meat, etc. Seven days after the operation there was increased vitality, and the patient gained eight pounds in weight gradually during the first three months after the operation; during the next two months the patient slowly lost ground, and finally succumbed. It was found at the *post-mortem* that the disease had extended to the mesenteric glands. M. Nicaise prefers a single operation, and to open the stomach immediately, especially when the patient is very feeble. To divide the operation into two stages is only justifiable when the patient is fairly strong, and can still take some amount of nourishment.

III.—NOTES FROM RUSSIAN, POLISH, ROUMANIAN, AND SWISS JOURNALS.

BY VALERIUS IDELSON, M.D., BERNE.

Non-Puerperal Hæmatoma of Major Labium and Vagina.—As is known, genital hæmatoma generally represents a rare occurrence. According to Winckel's statistics, only one case of the lesion comes to 1,600 labours. By far still more rarely such hæmatomata are met which develop independently from the labour act. An interesting instance of this rare kind has been recently communicated (*Proceedings of the Tambov Medical Society*, May 17th, 1888, p. 151) by Dr. N. M. Kakushkin, house physician to the Tambov Zemsky Hospital. A weak and sickly peasant woman, æt. thirty, married at twenty, delivered normally six times, was admitted about ten days after her last labour on account of fever and painful swelling about her genitals. According to the woman's statement, about two or three hours after the delivery she had climbed up, or rather stepped up, from the floor to a stove-couch (Russ. *lejanka*—"stove for lying on") about two and a half feet high, the feat being accomplished with but great efforts and straining, and followed immediately by the appearance of acute spasmodic pain and swelling about the genital slit. On examination, Dr. Kakushkin found the right major labium occupied with a bluish, elastic, but vaguely fluctuating globular tumour, spreading up under the right vaginal wall, to terminate in about four centimetres from the fornix, its size being that of a new-born infant's head. Near the vaginal outlet, on the vaginal mucous membrane, there was seen an attenuated and eroded patch of the size of a sixpenny piece. The womb was slightly displaced towards the left side of the pelvis (*latro-versio dextra*), the micturition being painful, but the rectal function normal. Two days later the author made an incision, six centimetres long, across the said eroded patch, and emptied about one pound of blood clots, and some dark fluid blood. Having scraped out the cavity with a sharp spoon, he washed it out with a three per cent. boracic solution, plugged it up with stripes of iodoform gauze, and applied an antiseptic dressing which was changed daily after every washing out. The cavity was found filled up about the eighth day, but the patient could be discharged only on the 15th, since the operation was followed by high fever (40°C.) of five days' duration, offensive uterine discharge, diarrhœa, cough with expectoration, and a circumscribed infiltration of the left lung under the scapula. All the symptoms, however, speedily disappeared under the influence of antiseptic irrigations of the womb.

Analysing his interesting case, Dr. Kakushkin comes to the conclusion that hematoma in his patient resulted from a rapid excessive rise of the blood-pressure in the congested genital vessels, the rise having been caused by violent contractions of the abdominal muscles during the patient climbing up the stove-couch. A puerperal flabbing or softness of the pelvic tissues is regarded as a favourable predisposing moment for the extravasation.

Blotting Paper as Material for Babies' Napkins.—In 1880 Dr. S. E. Molodenkoff, of Moscow, published a note in which he warmly recommended blotting paper as the best material for babies' napkins, the advantages claimed being cleanliness, freedom from any offensive odour, and cheapness. The method consisted in wrapping the child's buttocks and thighs in a piece of the paper doubled in the shape of a triangle, any soiled napkin being immediately thrown into the fire. To verify Molodenkoff's statement, Dr. Zakhar J. Babanasiantz, of Tiflis, (*Transactions of the Transcaucasian Lying-in Hospital for 1887*, vol. ii., p. 320) undertook a series of comparative observations on thirty-five healthy new-born infants wrapped in blotting paper up to the neck, and on a number of those swaddled in ordinary way (linen napkins), all other conditions remaining identical in all the children experimented upon. The temperature of the body, sleep, state of the skin in the paper cases proved to remain as normal as in the linen ones. Erythema, eczema, and intertrigo made their appearance in the former decidedly not more frequently than in the latter, and invariably limited themselves to their usual situations (groins and around the anus). The children seemed to be quite comfortable in their paper wrappers, to judge from their still and quiet behaviour. Nevertheless, Dr. Babanasiantz does not believe that the paper napkins have any great chances to supersede the ordinary ones, for (1) the (inner) paper napkin does not protect the (outer) linen wrapper from being wetted or soiled; hence it proves necessary all the same to change the latter five or six times daily; (2) the paper napkin is not free from odour, and can contaminate the air just as much as a linen one when left in the child's room; and (3) to keep the infant in a really cleanly state by means of duly changing every soiled napkin, it is necessary to spend a good deal of paper (an average of one and a half roubles worth monthly). On the whole, Dr. Babanasiantz thinks that the paper napkins, while unsuitable for a routine universal use, may still prove very useful (1) in such cases as long journeys with infants, especially with those suffering from gastro-intestinal disturbances; and (2) in cases of cholera, dysentery, typhoid fever, etc., where it is desirable to limit the number of napkins, and is indicated to remove the soiled wrappers as speedily as possible, and to as speedily neutralise their injurious properties. It is possible that an immediate burning of the paper napkins in such cases will prove a better and cheaper method than disinfection of the linen ones. At least, an ordinary thick wrapping paper was with best results used in Professor Lazarevitch's obstetrical clinic, as a substitute for towels and napkins in all cases of labour.

Concerning Rational and Empirical Treatment of Gonorrhœa.

—“An overwhelming majority of practitioners,” Professor V. M. Tarnovsky says, in his ‘Course of Venereal Diseases,’ “treat gonorrhœa purely empirically, without establishing any correct scientific diagnosis based upon a due and exact determination both of the site of the morbid process, and those anatomical lesions which give rise to morbid discharge in the case given.” Referring to those words of the eminent syphiligraphist, Dr. Pavel M. Vülfovitch, of Temir-Khan-Shūra, in Dagestan, says (*Proceedings of the Caucasian Medical Society*, No. 19, 1888, p. 624) that they especially hold true in regard to the Russian military hospitals, where a rational management of gonorrhœa is utterly unattainable, since they do not possess either endoscopes, or Guyon's apparatus for injections into deeper portions of the urethra, or Mercier's and Nélaton's catheters, or exploratory bougies; in fact, anyone of those instruments which are necessary for a venereal department just in the same degree as scalpels for a surgical one, or an ophthalmoscope for an ophthalmological ward. Especially the endoscope is regarded by Dr. Vülfovitch (in common with Professor A. Gay, *vide* his ‘Course of Venereal Diseases,’ 1888, p. 46) as the most important auxiliary means for carrying out a rational treatment of chronic gonorrhœa. And what results can be expected from an enforced empirical treatment of the common affection in question, is well illustrated by his own experience. During the first six months of 1887 there were admitted to the local military hospital 650 soldiers, seventy-three of them (11.2 per cent.) for venereal diseases—to wit, eleven for syphilis, nine for soft chancres, and fifty-three (72.6 per cent.) for gonorrhœa (of which 71.7 per cent. were chronic cases with exacerbations, and 9.5 per cent. complicated with orchitis). The total number of days spent by the urethritic patients in the hospitals was 2,605; the average stay, therefore, amounted to 49.1 days, the

maximal one being 199, and the minimal nine days. In none of the cases the affection presented any special severity, or any unusual deviations from a usual type. All the men were young, strong, well-made, and muscular—in short, all were enjoying a reproachless general health. Even amongst those (six) men who remained in the hospital from twelve to twenty-six weeks, none belonged to those “tuberculous, scrofulous, or anæmic persons, who are especially predisposed to a chronic or protracted gonorrhœa” (Gay, *l.c.*, p. 32). All the cases were treated by the intra-urethral injection of various drugs recommended in all text-books. The Temir Military Hospital is well managed in all hygienic and dietetic regards. And nevertheless, the average duration of gonorrhœa was as long as 49.1 days, while, according to Tarnovsky (*Voenna-Meditzinskii Zhurnal*, February, 1881), even the (hospital) average amounting to thirty-two days must be regarded as an extremely high one. It is not difficult to see from the above facts that a rational treatment of gonorrhœa, as secured by the use of various diagnostic and therapeutic instruments (however costly they might be), would prove by far cheaper than a routine empirical one, as practised by the bulk of the profession all over the world.

Iodoform in Facial Lupus Vulgaris.—Dr. I. I. Piontkovsky, a Caucasian practitioner, details (*Proceedings of the Caucasian Medical Society*, No. 21, 1888, p. 678) two interesting cases of facial lupus speedily and permanently cured by the local use of iodoform. One of the cases is that of a weak and sickly young man of seventeen, who sought the author's advice in 1881, on account of the disease of eleven years' standing, the lesion occupying the lower half of his nose and the adjoining portions of the cheeks, and, on the whole, “having the outlines of a butterfly with spread wings.” The nose was the site of an indolent, easily bleeding, shallow ulcer, covered with papillary excrescences and greenish-brown dry scurfs, while on the cheeks there were present tumours about the size of a shilling and a florin piece, and consisting of (partly isolated, partly coalescent) hard nodules, the integuments over them presenting at some points excoriations, and at others profuse desquamation. Notwithstanding a continuous treatment with iodide of potassium, cod-liver oil, scraping out, etc., the process was spreading ever steadily, though but very slowly. At first, scraping out (by means of a steel pen) and cauterisation (with solid nitrate of silver) were tried by Dr. Piontkovsky, but no improvement could be obtained from eight sittings in the course of three months. After another scraping out of the ulcers and nodules, iodoform (first in powder, later on in an ointment made of two drachms of the substance to half an ounce of vaseline) was resorted to, to be applied twice daily. A striking improvement rapidly set in. In five weeks (in March, 1882) everything healed, the single trace left being “a smooth, shining, soft, and pliable scar of a whitish colour.” The patient remained quite well when seen again about *five and a half years* later (in autumn, 1888). The other case refers to a colonel's wife, æt. forty-seven, a strong and generally healthy woman, who first noticed an indolent (subsequently exulcerating) nodule on the left nasal wing in 1864, and was for many years vainly treated by cauterisations with solid nitrate of silver, iodide of potassium internally, etc. In 1877 the whole affected portion of skin was excised by Dr. I. I. Minkiewicz, after which she remained free from lupus for six years, but in 1884 the disease re-appeared in the same situation, to persist up to her coming (in April, 1887) under the care of Dr. Piontkovsky, who found a painless shallow ulcer of the size of a barley grain, with flabby edges, while in its neighbourhood there were felt (through thinned and desquamating integuments) numerous firm nodules of the size of a pin's head. The iodoform ointment was at once applied (twice daily, morning and evening). By the end of three weeks the ulcer healed, the nodules resorbed, and only a smooth, soft, and almost imperceptible scar remained. Basing his views on the well-known researches of Koch, Pfeiffer, Demme, Doutrelepon, Cornil, Leloir, etc., Dr. Piontkovsky thinks that lupus is nothing else than a local cutaneous tuberculosis, and, accordingly, attributes the curative power of iodoform in regard to the disease to a parasiticide action of the substance. A beneficial action of the drug in lupus has been praised also (in 1883) by Professor A. G. Polotebnoff, on the ground of two years' experiments of his own. On the other hand, Dr. V. A. Kobylin, of Tiflis, says (*Proceedings of the Caucasian Medical Society*, No. 21, 1888, p. 683) that he was unable to obtain from iodoform anything beyond a temporary improvement, which was always followed by recurrence of lupoid nodules. He adds, however, that he has not yet seen any single instance of true lupus radically cured by *any* means.

On the Biology of Vomiting in Pregnancy.—In the Polish weekly *Wiadomości Lekarskie*, No. 6, 1888, p. 161, Dr. Swiecicki criticises various current hypotheses, seeking an explanation for a strikingly frequent occurrence of sickness during pregnancy. The author finds all the theories in vogue quite untenable, and sketches out

an etiological hypothesis of his own. As is known, H. Nasse has proved by his observations on pregnant women and dogs that the amount of hæmoglobine during pregnancy is diminished comparatively with a non-pregnant state, "the decrease being as constant as an increase in the amount of fibrine." In consequence of the decrease of hæmoglobine, Dr. Swiecicki thinks, the pregnant woman's tissues must necessarily present a lessened power of resistance and *eo ipso* an increased irritability. An augmented excitability of the vomiting nervous mechanism is said to easily explain why the pregnant are so strongly predisposed to vomiting (just as a similarly increased irritability of the salivary nerve-apparatus explains the occurrence of profuse salivation in pregnant women). The fact that sickness is usually present only during the first two months of pregnancy, and then ceases, cannot overthrow the hypothesis, since it finds an explanation in the well-known biological phenomenon that "every organism with time becomes accustomed to its abnormal state." Besides, as Fehling has recently shown, the amount of hæmoglobine somewhat rises during the last months of pregnancy.

In the *Wiadomosci Lekarskie*, No. 8, 1888, p. 225, Dr. F. Sielski, of Lvov, writes that Dr. Swiecicki's hypothesis, according to which "the cause of frequent vomiting in pregnancy is a kind of chlorosis," actually explains nothing whatever. That a decrease of hæmoglobine by itself, however great, cannot possibly be the cause of vomiting, is clearly demonstrated every day by the fact that in chlorosis vomiting occurs relatively rarely. Further, the chlorotic hypothesis fails to explain (1) an abrupt cessation of vomiting immediately after abortion or intra-uterine death of fœtus, and (2) the occurrence of vomiting in some women only during the second half of pregnancy. On the whole, Dr. Sielski believes that vomiting of gravidity can be caused (1) in a reflex way, either in consequence of an undue stretching or compression of the uterine nerve-plexus (especially in cases of uterine displacements), or in consequence of compression and stretching of the ovaries with their nerves (just in the same way as vomiting can be caused during laparotomy, by any manipulation in the ovarian region); (2) by actual gastric diseases to which the pregnant are subject in the same measure as chlorotic women; (3) by morbid states of the woman's nervous system in general.

Cold Douches and Bromide of Sodium in Epilepsy.—In the *Correspondenz-Blatt fuer Schweizer Aerzte*, No. 5, 1888, p. 152, Dr. P. Glatz, of Champel, near Geneva, highly recommends the treatment of idiopathic epilepsy by cold (18° to 10° C.) rain-douches of half to one minute's duration, of three or four atmospheres' pressure, once or twice daily. Simultaneously, bromide of sodium must be administered in the daily dose of from four to ten grammes, divided into three portions (to be taken half an hour after each meal). The treatment must be continued (with short intervals from time to time) for many months. According to Dr. Glatz's experience, even large doses of bromine are tolerated satisfactorily during the said hydro-therapeutic treatment. Epileptic subjects bear the douches invariably very well, and even, in a couple of days, commence "to expect them with impatience." In six cases, positive galvanisation of the medulla oblongata and a direct electrification of the brain (after the methods laid down by Erb, Ziemssen, Althaus, etc.) were tried, but the results were disappointing. An elaborate paper of the same writer on the same subject may be found in the *Revue Médicale de la Suisse Romande*, April 15th, 1886.

Needle in Male Urethra.—In the Roumanian monthly *Spitalul*, December, 1887, p. 478, Dr. Popescu details the case of a grocer's boy, æt. fourteen, who was admitted to the Spitalul Comunal din Alexandria about two days after his having introduced into the urethra a large darning needle, the ear foremost (*urechile înainte*). There were neither any vesical symptoms, nor any general reaction. On examination, one of the needle's ends was found projecting under the skin from the urethra into the right scrotal region, while the other one could not be discovered, either on the external examination or on that through the rectum. A sound introduced into the meatus struck the foreign body in about nine centimetres from the orifice, and "brought the outer portion of the needle into a level-like movement." Having anaesthetised the lad, Dr. Popescu made an incision, two centimetres long, in the perineal region, just behind the scrotum, and divided all tissues layer by layer down to the urethra, to disentangle the needle's extremity, fixed somewhere in the urethral wall. The needle (already corroded) measured seven centimetres in length. The after-course was utterly uneventful. The boy was discharged perfectly well on the twenty-second day after the urethrotomy. Dr. Popescu believes that the needle's extremity never entered into the patient's bladder, owing to the boy having thrust the other end through the urethral wall during his vain attempts at the withdrawal.

IV.—SELECTIONS FROM SPANISH AND OTHER MEDICAL JOURNALS.

BY G. F. CADOGAN-MASTERMAN, M.D.

El eritema de los recién nacidos. Dr. Viñeta-Bellaserra (*Revista de biencia Médicas*).—Erythema, in its characteristic form of minute vesicles, each surrounded by a scarlet areola, is often seen on the skin of very young children. In a short time, however, each tiny blister is broken; the rings coalesce, and we get a patch of larger or smaller dimensions, uniformly red, and its origin is with difficulty recognized. At the margin only can we detect, after careful search, the isolated vesicles which once dotted the whole of the surface. And if they remain distinct we may be sure that the attack is a slight one, and that in a few days the skin, lightly desquamating, will return to its normal condition.

In the case, however, of badly fed, or carelessly nursed infants, the result is very different. The unhealthy skin, especially that between the thighs and on the buttocks, irritated by the fæces and rubbed by the napkins, becomes more and more reddened, and looks exactly as if the epidermis had been stripped off and the surface covered with a coat of varnish; and in this stage there is generally a certain amount of well-marked oedema. And there is usually some pain accompanying it, although, apparently, not so much as the intensely scarlet surface would seem to promise, and by the nurses the distress this occasions is more frequently referred to colic than to the true site of it. In male infants the scrotum is often acutely affected, and in females the *labia majora*, which may lead to serious mistakes in practice; but the parts before mentioned are more generally attacked. In neglected cases it may extend to the trunk, and even to the face. Its etiology is simple enough. It is invariably the accompaniment of atrepsia: the child must have diarrhoea, and the skin be irritated by the neglect of its results. In other words, it is the outcome of bad feeding and neglect. In its worst form the skin is so highly injected that it seems to be bleeding at every pore. It occasionally assumes a papular form, which may be carelessly confounded with variola, as in its smooth tumid redness it is mistaken for erysipelas. But its site, the absence of fever, and the temperature, which is generally lower than in health, suffice for its differentiation. Nevertheless, puzzling cases sometimes occur, as when a very feeble child is attacked by small-pox, for then the temperature may remain low, or even sub-normal, in spite of it, and we must wait for the umbilication of the pustules to decide them. Vaccine roseola somewhat resembles it, but is distinguished by its broad, pale pink patches, without raised borders, and appearing rather on the face and arms than on the lower parts. From syphilides, the coppery colour of the latter, and the scars evident to eye and touch, separate them; and with infants erysipelas usually starts from the navel, or from the sites of vaccination; and its abrupt margin, distinctly elevated, and the indurated feel of the inflamed skin, are sufficiently distinctive.

Some authors, and most nurses, look upon the thrush (aphthæ) and this form of erythema as common in causation, if not as cause and effect, but although both occur in weakly children there is no other link between them. Thrush is due to a fungus, which can only grow when the buccal mucus is acid; infantile erythema is invariably caused by diarrhoea. Therefore its treatment is that of its cause: stop the diarrhoea and the erythema is cured simultaneously.

[Perhaps the best plan is to give a grain of sulphate of iron in a little syrup every hour or two, and apply locally a weak ointment of the yellow oxide of mercury.—*Trans.*]

Sobre los principios verdaderamente tóxicas de los alcoholes de fábrica. Dr. V. Peset (*La Crónica Médica de Valencia*).—It is the fashion now-a-days to attribute half the evils of intemperance to the drinking of bad liquors. The mongrel grain and potato spirit is supposed to be so much more intoxicating—that is, poisonous—than pure Cognac or genuine old Highland whisky; and drunkards are compassionately spoken of as being the more drunk because they generally consume the cheaper and, suppositiously worse, spirit. A commission, however, appointed by the Academy of Sciences of Paris, as well as the results of the analyses of several independent chemists, assure us that this is not the case, and that high-class brandies contain absolutely more of these terrible impurities than the "silent spirit," from which the ingenious British, or the crafty Hamburgian, dealer manufactures any kind of wine, spirit or liqueurs, the consumer may please to ask for. These impurities are of two kinds—those more volatile than proof spirit, such as aldehyde, acetyle and acetic ether; and those which come over later on, as amylic, propylic and butylic alcohols and ethers. In true brandies obtained by the distillation of wine there are found in addition æthanolic ether (which give it its characteristic odour), caprylic, propylic, valerianic alcohols; furfural, metaldehyde, paraldehyde, and croton-aldehyde, and even isobutylglicon; but one is glad to learn that there is very little of it.

The presence of furfural is due to the custom of charring the interior of the casks, and "the absence of aldehyde," says Valsecchi, "proves that the brandy has not been distilled from wine." Ordonneau analysed in 1886 three hectolitres (about eighty-four gallons) of good cognac, twenty years old, and he found 388 grammes (a little over twelve ounces) of impurities in the hectolitre; we may say roughly half a fluid ounce to the gallon. Seventy per cent. of these belonged to the butylic series, and twenty-five to the amylic, with cœnanthic ether and other volatile bodies.

Now, in the report made to the Academy of Sciences in December, 1887, it is stated that in commercial spirits the amount rarely reaches one per cent., and is generally not more than one or two-tenths per cent. of the volume, so, good mature cognac, twenty years in cask, has really about three times as much of these reputed maddening agents, and quite as much amyl (fusel oil) as the ordinary potato spirit, which, coloured and flavoured, is sold in the British public-house as genuine French brandy.

Good "silent spirit," supplied at about twenty shillings a gallon, in the form of rectified spirit of wine, and containing 84 per cent. of alcohol, is almost absolutely pure; and, with the necessary colouring and flavouring with cœnanthic ether, makes about three times it bulk of "brandy," or, with a little turpentine and old oil of lemon, four times as much "gin," and, as far as alcoholic purity is concerned, is immeasurably better than the best *eau-de-vie* Bordeaux ever sends us. So we have here the anomaly that the factitious article is really better and purer than the genuine, and at about one fourth its cost.

Nevertheless, there would seem to be some foundation for the belief that coarse spirit, made from potatoes or damaged grain, has some deleterious action over and above that of the alcohol, although not due to bodies which, as we have seen, exist in the highest class brandies as well; and the author suggests the presence of ptomaines or leucomaines, derived either from the ferments or from decomposing vegetable matter contained in the tubers or grains, or else generated by their mutual reaction during fermentation. There is, of course, the initial difficulty that these bodies are—at least as we generally know them—non-volatile, and that if they were carried over mechanically, the cloudy "wash" which would necessarily accompany them would render the spirit turbid and unsalable. But there may be volatile bodies of this class, or during distillation, they may during their own decomposition give rise to bodies as poisonous as themselves. Common spirit is often ammoniacal [When examining the primitively made rum called *caña* in South America, I often found a considerable percentage of ammonia, which I put down to the charring of the wash in the small unset stills heated over a naked fire.—*Trans.*], and as fermentation and putrefaction are really collateral phenomena, it is very possible that volatile vegetable cadaverines may be formed, and be found in the finished spirit in sufficient quantity to lead to special toxic effects; but, when one sees or hears of the quantity of liquor swallowed by drunkards, there is, after all, little need to adopt theoretical explanation for effects the sufficiently poisonous alcohol itself accounts for.

Influence of Hydrofluoric Acid on the Bacillus Tuberculosis. Dr. Grancher (*Transactions of the Biological Society of Paris*).—The author has made a series of experiments with this gas, which has lately been recommended for the treatment of pulmonary tuberculosis, but the results are not encouraging. Cultivations of the bacillus of Koch were exposed to air containing as much of the acid as could be respired with safety, without any apparent effect upon them. And of eight animals inoculated with the microbe—half simply mixed with water, and the others after its treatment with hydrofluoric acid—the four in the latter group died four days earlier than the others. Dr. Daremberg, also, stated that he had found the treatment ineffective; and as the sputum never showed any acid reaction after the use of the gas, he believed that it never entered the lungs at all.

Cicatrisação d'um Lupus Rebelde. Zeferino Falcão (*A Medicina Contemporânea*, Lisbon).—A lad suffering from lupus of the face came under the care of the writer in 1886. The disease had been under treatment for some time previously by medicine and mineral waters, but, of course, got steadily worse. After some delay, the plan of linear scarification was tried by Senhor Falcão for a period of two months, and then scraping with Wolkman's spoon. The result was the healing of part of the affected surface, but fresh nodules continued to form around its margin. They were destroyed with potassa fusa, and the eschar thickly powdered with iodoform, but in vain—the disease still extended. The patient had borne this long and varied treatment with perfect *sang-froid*, including the very painful one of making punctiform incisions and introducing into each a drop of iodine mixed with glycerine, and as a last resource the plan recommended by Schwimmer was tried. It consists in applying pomade containing 10 to 15 per cent. of pyrogallie acid until a slough is formed, and dressing this with mercurial ointment until it separates. This treatment is not

free from danger, owing to the possibility of the pyrogallie acid being absorbed and exerting its extremely destructive action upon the blood-cells; but it succeeded in the above case. At the end of three months the disease was arrested, and up to six months ago there was no appearance of its return.

Atropin and Hyoscyamin.—These two alkaloids have the same chemical (ultimate) composition, although they differ in their therapeutical effects, their melting point, the double salts they form with gold, and the extent of their rotatory power on a beam of polarised light. They are evidently isomeric modifications of the same substance, and hyoscyamin can be easily converted into atropin, although the converse change has not yet been effected. They occur together in belladonna root, which yields sometimes the one, sometimes the other, even when the same process for extraction has been used. Dr. Wills, at the request of the Schering Chemical Company, has been investigating this point, and he finds that when hyoscyamin is heated to 100 per cent.—that is, slightly above its melting point—it changes into atropin; and the same change occurs in the cold if a few drops of caustic alkali be added. Hyoscyamin appears to have great value as a soporific, and is most conveniently administered by the solution of one of the 1000 grain pellets in water, and its subcutaneous injection; but it is evident that care must be taken to make the solution in cold or only very slightly warmed water, and in the manufacture of the pellets themselves equal care must be taken to avoid any elevation of temperature. Neglect of the one or other of these precautions is the probable explanation of the discordant results obtained by the use of this potent but most unstable remedy. Then, again, the unquestionable value of what has been called that most unchemical mixture of liquor potassæ and tincture of hyoscyamus, of which Mr. Cock was so fond, and Sir Henry Thompson speaks so highly, is explained. There is mutual decomposition, but the result is not inertia, but improvement. We do not want in cystitis so much sleep as the relief of pain, and the atropin which must be formed in the mixture meets this condition. Whether it would not be more rational to give carbonate of potash and tincture of aconite is another question.

I may mention that in a recent case of the above disease I found that one grain of quinine every four hours acted far more effectually, the pus lessening, and at length disappearing very rapidly; and when we remember that the whole of this alkaloid administered reappears in the urine, the source of the effect is not so remote as it appears at first sight to be. And here, again, it might be better to inject the quinine directly into the bladder. The patient had been taking potash and henbane with excellent results previously, but after a time the improvement became stationary, and a repetition of the washing out of the bladder was declined by him, the first having caused very severe rigors. The quinine was given in consequence with the result of making its *motif* unnecessary.

Antipyrine in the First Stage of Labour.—The use of this remedy during parturition is evidently extending. In three foreign journals this month I find it mentioned with approval. It should be given as soon as the pains are defined in a dose of one gramme (fifteen grains), then in one hour ten grains more, afterwards repeating the latter dose every two hours as long as may be necessary. It is said, that the uterine contractions are not in any way interfered with either in force or duration, but that only a little inconvenience and no suffering is felt by the patient. When there is great rigidity of the os, hydrate of chloral, in doses of ten grains every hour, may be taken as well. The antipyrine should be given in plenty of sweetened water, or in infusion of orange peel.

V.—OBSTETRICS.

AN ADDRESS DELIVERED AT THE OPENING OF THE SECTION OF OBSTETRIC MEDICINE, AT THE ANNUAL MEETING, BRITISH MEDICAL ASSOCIATION, GLASGOW, AUG. 7th, 1888.

By THOS. MORE MADDEN, M.D., F.R.C.S. ED.,

PRESIDENT OF THE SECTION; OBSTETRIC PHYSICIAN, MATER MISERICORDIÆ HOSPITAL, DUBLIN.

I GRATEFULLY appreciate the honour of my election to the Presidency of this important Section of the British Medical Association, which I regard as a compliment to the Dublin School of Midwifery, with which I have been long connected, rather than to an individual otherwise so unqualified for the distinction as myself. I shall therefore trust to your continued indulgence for condonance of whatever shortcomings may be observable in my attempt to discharge the duties now entrusted to me. The present meeting of the Association should, I think, be especially valued by the members of this Section, for it is to Scotland, and to the genius of her sons, that the twin sciences of obstetrics and gynecology—which we are here met to cultivate—owe their earliest development in

Great Britain; and to a large extent their recent progress is traceable to the same source.

Long before there was any systematic teaching of midwifery either in Dublin or in London, and fully twenty years before the foundation in the former city of the great maternity hospital—on the staff of which I served my apprenticeship to the obstetric art—a Professorship of Midwifery was, in 1725, established in the University of Edinburgh, and I have had in my possession the ancient manuscript notes of the obstetric course delivered there in 1756 by Professor Young, as well as of the lectures of Dr. Hamilton, by whom he was succeeded. From that time the obstetric teaching of the Scottish schools has come down in an unbroken continuity of excellence to our own day, and its character has been amply maintained by the reputation of their *alumni*. Thus it was to William Smellie, a native of Lanarkshire, that our professional forefathers owed a "System of Midwifery" as far in advance of any that had preceded it as the obstetric science of these last twenty years of the nineteenth century has progressed beyond that taught in 1752 by Smellie. To the same writer is more especially due the credit of the first real improvement on Chamberlen's original forceps, as well as directions for using that instrument, as he said, "on rational and mechanical principles," which even yet might be studied with some advantage by modern obstetricians.

It was in this country also that the mind of William Hunter received its early training in that obstetric art which he afterwards so successfully cultivated and practised in London, and of which he there became the most distinguished of all its older British teachers. Nor even in this brief retrospect can it be forgotten that in the city wherein we are assembled, modern intra-peritoneal gynecological surgery was first anticipated in 1701 by Dr. Houstoun, in the curative treatment of an ovarian tumour by abdominal section. Moreover, a century and a quarter later it was to another Caledonian surgeon—Mr. Lizzars, of Edinburgh, whose early ovariectomy cases were published in 1825—that the revival, although in a very different and improved form, of Houstoun's first laparotomy operation is mainly due. I shall not attempt to follow further the long history of the obligations of our art to the older Scottish schools, or pause to offer my humble tribute of respect to the memory of their ablest teachers—the late Sir James Simpson, whose name will be recalled as long as suffering humanity finds surcease of pain in anæsthesia, and as long as obstetrics and gynecology are cultivated. Nor need I here refer to the services to our branch of medicine of Dr. Matthews Duncan, who, at the last meeting at Edinburgh of this Association, filled the position I now occupy, or allude to the well-recognised gynecological work of Dr. Keith and of many other no less distinguished living Scottish authorities.

Whilst willingly acknowledging how much we owe to Scotland, I cannot omit a briefer reference to the similar labours of the Dublin school, although the credit of not a few of the obstetric advances that originated there in by-gone years has more recently been elsewhere appropriated. Thus, for instance, the employment of version as a substitute for craniotomy as advocated by some modern German and English writers, was first suggested in 1752 by Sir Fielding Ould, the second Master of the Dublin Hospital, and was revived a century later in the same place by the late Dr. M'Clintock, whose genius, erudition, and obstetric skill entitled him to remembrance even in our most oblivious of professions. In like manner the management of the third stage of labour by the method claimed as his own in the late Dr. Spiegelberg's recently translated "Text-Book of Midwifery," is practically almost identical with that followed in the Rotunda from time immemorial, as described several years ago in my edition of "The Dublin Practice of Midwifery." The resuscitation, moreover, of the use of the forceps, the prophylaxis of *post-partum* hæmorrhage, and many other improvements in the management of child-birth and the puerperal state—the introduction of which is claimed elsewhere—have, I may repeat, also emanated from the same practical school of midwifery.

The foregoing reference to the historic claims of the ancient Scotch and Irish centres of obstetric science might be readily expanded. Time, however, forbids my further trespassing either in this way or by any allusion to the better known services of the early fathers of English midwifery; and, as Raynald, Willoughby, Harvey, Cook, Chamberlen, Chapman, Giffard, Denman, and the host of other pioneers of obstetric knowledge, many of whose lives and labours are so well chronicled in Dr. Aveling's erudite "Biographical Sketches of British Obstetricians," I shall, therefore, devote the remaining portion of this address to the more practical consideration of the results of some of the recent developments of obstetric and gynecological science.

The progressive improvement of midwifery practice has been strikingly evinced during the past few years. Thus the pathology and preventive treatment of intra-uterine death and abortion have been freed from much of their former obscurity and difficulty by the recent writings of Dr. Priestly. The prevalence of puerperal septicæmia, by epidemic

outbursts of which, in my early days, I have repeatedly seen the crowded wards of a great maternity hospital decimated, has been largely diminished by the hygienic and antiseptic measures now adopted for its prevention; whilst, if septicæmia should still occur, we are now armed with more scientific means for the curative treatment of this disease, which some years ago was generally classed amongst the incurable *approbria* of our art. In like manner, by the adoption of improved methods for the prevention and treatment of *post-partum* hæmorrhage, that once frequent source of obstetric mortality has been almost completely removed. At the same time the throes and pains of labour have been rendered more endurable by the employment of comparatively safe anæsthetics, such as the mixture of two parts of ether and eau de Cologne with one of chloroform, which, for nearly twenty years, I have found a generally efficient and agreeable anæsthetic in such cases. Moreover, by judicious instrumental assistance, we may now, in many instances, safely abridge the duration of that formerly often long-protracted period of parturient suffering, which, when a student, I have too often seen allowed to continue unrelieved for forty and fifty, and even for eighty, hours and upwards. Lastly, the former appalling frequency of child-destroying operations has been reduced in an exact proportion to the increasing employment of the forceps. Nor have the limits of the utility of this instrument, as a substitute for the cephalotribe, craniotomy forceps, cranioclast, *et hoc genus omne*, been even yet fully reached.

The Use of the Forceps, and its Improvement.—The main reason why any embryotomic instruments are still included in the ordinary obstetric outfit, appears to me the fact that most midwifery practitioners do not recognise sufficiently the compressive power of the long forceps, and, moreover, rely exclusively on some one form of forceps, whether the head be above or within the pelvic cavity, and without reference to the kind of mechanical power—tractile, lever, or compressive—that may be specially required in each case. Desirable as it may be to carry as few implements as possible in the obstetric bag, it is, nevertheless, impossible to combine in any one instrument properties so distinct as those referred to. In operative midwifery there should, surely, be some definite proportion between the power employed and the resistance to be overcome. Hence it seems about as needless to resort to an instrument of such compressive and lever power as the double-curved long forceps, to assist delivery in an ordinary case of delay in the second stage, as it would be to employ a steam-hammer to crack a walnut.

I have endeavoured to carry out these views in the two instruments now exhibited, which have been considerably modified and, as I think, improved in the course of experience since I first demonstrated the use of their original models. The first is a short straight traction forceps, the blades of which are six inches in length and are so curved as to fit



FIG. 1.—DR. MORE MADDEN'S SHORT MIDWIFERY TRACTOR

the foetal head very exactly, and so widely fenestrated as to allow the scalp to protrude when applied, and thus protect the maternal passage during extraction. This instrument, as may be seen, is very portable, and, locking loosely, is easily applied; and being a really efficient tractor, as I have proved by experience of its use in upwards of three hundred cases, may, therefore, be employed in nine-tenths of the cases in which any instrumental assistance is required—namely, those in which delay arises from inertia in the second stage of labour.

The second instrument shown is intended only for cases of difficulty from disproportion or pelvic flattening. The blades are, therefore, of considerable length and strength, and are approximated by a powerful screw, by which the amount of compressive force exercised may be exactly regulated. The affixable traction rods are easily closed or separated by a simple and novel mechanical arrangement. My tractors differ in several respects from any others, and are so made as to be applicable to any forceps, including in their handle a case for hypodermic syringe and discs. This forceps, as will be seen, is not only a tractor and lever, being convertible at will into a short traction forceps by the removal of the compressing handles, but, in its entirety, when these are affixed, is moreover a compressor of great power, with which the foetal head may be gradually moulded out and compressed within the limits of viability, so as to admit of delivery through pelves, from which a living child could hardly be otherwise extracted. I need hardly add that such an instrument as this latter requires great caution in its use, and should be employed only in the exceptional cases for which it is designed, and as a substitute for embryotomic implements. These instruments are made by Messrs. Corcoran, Stephen's-green, Dublin, who have very successfully carried out my views in their construction.

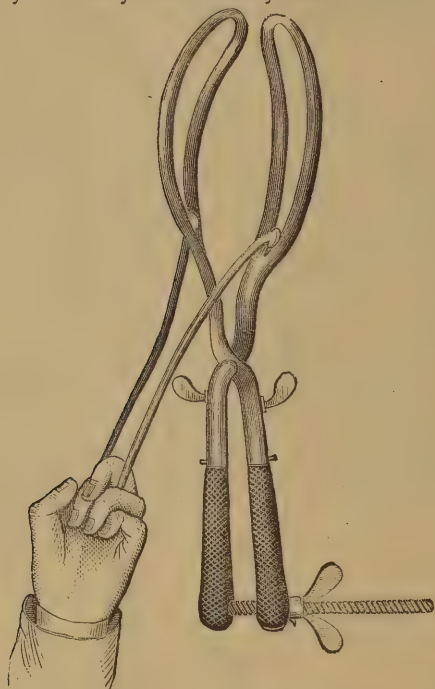


Fig. 2.—DR. MORE MADDEN'S COMPRESSING DOUBLE FORCEPS

Recent Progress of Gynaecology.—The development of this branch of medicine since our association last met in Scotland, has been still more remarkable than that effected in the practice of midwifery during this period. Thus, for example, only a few years ago many of the most frequent forms of endo-uterine and peri-uterine disease were beyond the diagnostic and remedial reach of gynaecologists, then unprovided with those means of rapidly and thoroughly dilating the cervical canal,



Fig. 3.—DR. MORE MADDEN'S RAPID CERVICAL DILATOR

or with the many other methods of direct investigation by the aid of which any well-educated practitioner may now recognise and treat endo-uterine, ovarian, tubal, and other intra-peritoneal and pelvic complaints that baffled detection or treatment. Nor in those pre-antiseptic days could have been anticipated the wonderfully successful results realised from laparotomy operations, and more especially

ovariotomy, as well from some still more recent developments of intra-peritoneal surgery in tubal and other diseases, including even peritonitis and cancer of the uterus, the latter a subject which has been recently elucidated in Dr. J. Williams' Harverian Lectures. In the last-named cases, however, it is a debatable question whether we should persevere further with the intra-peritoneal procedure for the removal of the uterus introduced by Freund, in view of the better results obtained from the vaginal method advocated by Dr. Martin, of Berlin; and also whether in the latter case the operation should be limited, as recommended by Dr. Williams and Dr. Braithwaite, to the removal of the cancerous portion, and not be extended to the extirpation of the entire uterus.

Only within the time referred to has the general correctness of Dr. Graily-Hewitt's views with regard to the importance and treatment of uterine displacements and flexions become commonly accepted. Neither were the symptoms and appropriate treatment of ovarian displacements understood until a more recent period, when attention was directed to them by Dr. Barnes' able paper on this subject in the *American Journal of Obstetrics*, and in a minor degree, perhaps, also by a memoir of mine on the same topic in the *Transactions* of the Irish Academy of Medicine; nor is it so long since the bearing of cervical lacerations on pelvic pathology, as first demonstrated by Dr. Emmet, of New York, first became recognised in this country. Finally, the diagnosis, importance, and curability of diseases of the uterine appendages, such as hydro- and pyo-salpinx, together with several other of the causes of female suffering and death, were, in like manner, practically ignored by gynaecologists until within a very recent period.

Influences of Prejudice and Fashion in Gynaecological Progress.—In the history of many of the successive developments of gynaecology just referred to, we may observe proofs not only of the progress of our art, but also of the two causes which have temporarily retarded its advancement. The first is the opposition generally offered in matters medical, as in most others, to all innovations, and the consequent reaction by which the pendulum of professional opinion is swung from one extreme to the other—exaggerated over-estimation, thus generally succeeding to earlier adverse prejudices. The second is the potent influence of fashion on medical opinion and practice; for, strange as it may be why this should be the case, it is nevertheless true that—

"In physic, as in fashion, we find

The newest is ever the rage of mankind."

This is strikingly illustrated in gynaecological practice, in which it now seems almost as much the fashion to ascribe female complaints to ovarian and tubal disorders, as, a few years ago, it was to attribute similar ailments to uterine flexions and displacements; or as, ten years earlier, it was the *mode* to credit them to chronic inflammation, or what was then regarded as ulceration of the neck of the womb; or yet, a century previously, to set them down in the phraseology of our professional ancestors, to "the spleen" or "the vapours."

Gynaecological Specialism and Woman's place therein.—In this connection I may venture to observe that I cannot agree with those who are opposed to the admission of women into the practice of our department of medico-chirurgical science for which their sex should apparently render them so especially adapted. I can see no valid reason why any well-qualified practitioner, male or female, should not be welcomed amongst us. Nor if there are women who prefer the medical attendant of their own sex, does it seem fair that in this age of free trade they should not be afforded every opportunity of exercising their discretion in a matter so personal to themselves. For my own part, I greatly doubt that, in these countries "the Lady Doctors" (as they are termed) will ever replace the ruder sex in the general estimation of their sick sisters. But, if not here, elsewhere at least, there is unquestionably an ample field for female practitioners, and, more especially, in India and other Oriental countries, where millions of suffering women and children are fanatically excluded from the possibility of any other skilled professional assistance; and I therefore think that such practitioners are entitled to admission into our ranks in the British Medical Association.

Laparotomy in Relation to Gynaecology.—Foremost amongst the proofs of modern gynaecological progress, the most signal is that afforded by the result of abdominal surgery in the treatment of ovarian tumours, as demonstrated in countless cases at home and abroad and in the country, more especially in the practice of Sir Spencer Wells, Dr. Keith, Mr. Lawson Tait, Dr. Bantock, Dr. Savage, Mr. Thornton, and other specialists in this department of operative surgery, which not very many years since, was so loudly and unfairly decried. Whether this should encourage the present frequency of resort to laparotomy in the various other intra-peritoneal morbid conditions in which it is now advocated, or not, is, however, another question, and one which, I think, may be still advantageously reconsidered.

Treatment of Fallopian Tube Diseases.—With respect to the tubal diseases, to the operative treatment of which so much attention is now devoted, and which I have elsewhere fully discussed, I shall only here again observe that, whilst recognising the fact that in some instances of pyo-salpinx and hydro-salpinx the removal of the diseased uterine appendages affords the only available means of treatment, and fully appreciating the surgical skill by which operations for this purpose have been brought to their present perfections, I have not, in my own experience, found laparotomy operations as general necessary in such cases as they are apparently now deemed by others. On the contrary, I am confirmed, by increasing observation, in the belief that in some instances these tubal diseases, more especially in cases of hydro-salpinx, may terminate favourably without any surgical treatment, and, moreover, that in other cases such collections, whether purulent or serous, may be evacuated by cautious aspiration through the vaginal roof. Very recently I had an opportunity of again proving the advantages of this method of treatment in the case of a lady, who, after many months of suffering, was sent to me from a distant country to have the affected uterine appendages removed, but whom I succeeded in relieving of her trouble, with the assistance of my friend, Dr. Duke, by aspirating the fallopian tube, and thus removing about ten drachms of fluid from the distended duct. I would, therefore, still urge the expediency of a fair trial of other less serious methods of treatment before resorting to the extirpation of the uterine appendages in these cases generally.

Operative Treatment of Uterine Tumours.—It would be impossible, within the limits of this Address, to enter at length into the consideration of a question so large and so controversial as the general necessity for surgical interposition in the treatment of uterine fibromata. This topic, I am glad to see, will be brought before you during this meeting by those eminently qualified to speak on the subject; and I trust that in the ensuing discussion some new light may be thrown on the comparative merits of the various intra-peritoneal and vaginal surgical procedures advocated in such cases, as well as on the value of electro-litical treatment. Nor, in this connection, should the possibility of arresting the growth of these tumours in some instances, by appropriate medical treatment, as well as the greater probability of thus effectively checking hæmorrhage so occasioned, more especially by the free administration of ergot and iodide of potassium, to which I have elsewhere called attention, be entirely lost sight of.

As to the former, or surgical method, I may, however, venture to repeat that, in the majority of cases of interstitial and sub-peritoneal uterine tumours, no active treatment whatever appears to me essential, inasmuch as such growths seldom, if ever, destroy life, and in many cases become arrested in their development and quiescent in their symptoms at the menopause, or may even possibly disappear altogether in the course of time. The latter event is, however, too exceptional to have much influence in determining the expediency of surgical treatment, and more especially that by oophorectomy, which is unquestionably called for in the case of fast-grown fibroids, giving rise to otherwise uncontrollable urgent hæmorrhagic or pressure troubles, particularly when occurring in young patients.

With regard to hysterectomy, although exceptional cases may occur in which this procedure is necessitated, the average mortality that has followed its performance is such as to forbid its general employment, as an operation of election, in a disease the average mortality of which, when left to nature, is so comparatively insignificant. Whilst as to myotomy, in view of its too common results I can only repeat that it would appear to me a method by which a patient may be effectually removed from a tumour, rather than as an operation by which a tumour can be safely removed from a patient.

Treatment of Uterine Fibroids by Electricity.—Although I have so nearly exhausted the allotted limits of this address, I cannot omit a few words in reference to the latest and most promising of the methods available in the treatment of uterine fibromata—namely, that by electricity. Within the past year and a half, I have had occasion to try this method, in some ten instances, in my hospital and private practice; and so far as the arrest of hæmorrhage is concerned, the result was most satisfactory, the bleeding being thus arrested in six of these cases. But with regard to the cure of the disease from this treatment, the possibility of which had been demonstrated in the experience of Dr. Apostoli and others, who had employed it on a much larger scale, I can only say that whilst I have not as yet seen the complete subsidence of the tumour effected in any of the cases so treated by myself, in three of them its apparent bulk became distinctly diminished even after six weeks or two months' treatment of this kind. It should, perhaps, be added that in all these instances I used Dr. Apostoli's original abdominal electrode, the current used being, of course, monopolar and acting directly on the growth by the intra-uterine pole, and was obtained from a powerful Leclanche battery of an estimated maximum current strength of 250 milliampères. In the first

of my cases I employed the electrolytic negative current, but after a little experience I abandoned this, and in the subsequent trials used only the positive current, which, although non-energetic as a galvanocaustic, is far less liable to give rise to trouble, and from its decided hæmostatic action is more suitable to these cases of large hæmorrhage producing tumours in which alone this or any other active treatment seemed to me generally necessary.

If, however, the results obtained by Dr. Cutter, and, still more conspicuously, those recorded by Dr. Apostoli, from the employment of electricity—namely, permanent benefit in ninety-five per cent. of the cases of fibromata thus treated by him—should be confirmed, as I hope may possibly be the case, by the larger experience of those who are here about to discuss this disease, then we should have good reason to congratulate ourselves on having at last arrived within sight of the long-sought-for safe and effectual curative treatment of uterine tumours.

In conclusion, it only remains for me again to thank you for the honour you have here conferred upon me, as well as for the patience with which you have listened to this address, and I venture to trust that you may possibly be disposed to agree with me in thinking that the foregoing *résumé* of some of the recent developments of obstetric and gynaecological science, imperfect as it is, affords a sufficient vindication of our branch of medicine from the aspersions which have been poured upon its followers. These advances and their results are surely more than enough to show that those by whom so much has been accomplished are engaged in no narrow specialism, but, on the contrary, should rank high in that noble and ever progressive profession of medicine, whose great objects are the prolongation of life and the relief of every form of human suffering.

The Spirit of the Societies.

BRITISH MEDICAL ASSOCIATION AT GLASGOW, 1888.

(From our Special Correspondent.)

THERE are over 25,000 medical men practising in Great Britain, about 13,000 of whom belong to the British Medical Association, but only about 1000 ever attend their annual meetings. It is remarkable that a certain number of old *habitués* are always to be seen at these gatherings. This year we missed the well-known face and form of Dr. Chadwick; De Chaumont, too, had joined the majority; in fact, there has been too long a death-roll. Those who do not attend console themselves with the thought that they will be able to read all that has been done in the journal. This is true, but they miss the personal intercourse and the associations, the meeting with old friends, and old teachers. The dead pages of letterpress can never supply for living communication with the men who read the papers. It is for the absentees we condense or give an abstract of the proceedings. The Glasgow meeting will long stand out as one of the most brilliant that has yet been held. The general addresses reached a higher order of thought, and more especially the address of Macewen, dealing with practical surgery, confers an impress upon the meeting. In fact, we might go so far as to say that his paper marks an epoch in surgery, and for many years to come we shall find a development of the practical elementary principles he laid down. The choice of Glasgow as the place of meeting for 1888 was singularly fortunate; the *locale* of meeting, the University, could not have been better chosen. The University, a very magnificent pile of buildings, stands high, looking down upon the exhibition, and in such close proximity that the members had only a few yards to traverse to enter the grounds, and unbend their minds by looking on the choice selections of art which have been gathered together by the enterprise of the inhabitants of the second city in the empire. Those who preferred the open air to the promenades of the Exhibition corridors, could sit outside in the charming grounds and listen to the strains of the magnificent band of the Guides Belges, or amuse themselves in many various ways provided by the Exhibition Committee. The first day of meeting was as usual devoted to the reading of the various reports presented by the various committees of the Association. The record is one of progress, and we may venture to state that this is all the more marked since the Association has been reformed, and since the principle of representation has been acknowledged and adopted. This dates back to the Liverpool meeting. There is only one point we need allude to in connection with these reports—viz., that the scheme of collective investigation has been abandoned—a scheme which has cost the Association some thousands of pounds without any proportionate advantage. It is useless to attempt to bolster it up any longer; *fruit* may now be written across its history. At the Belfast meeting of the British Association, Professor Tyndall threw a red herring across

the track, and his address for many years subsequently was a subject of bitter controversy.—Professor Gairdner, with well-meaning intention, no doubt, took the occasion of airing his religious views, and as the Association is made up of all shades of religious opinion, the natural result is that his address gave offence to many, and we are likely to have a modified repetition of what took place after Tyndall's address.—Dr. Moffatt was one of the first to take up criticism of the address in the *Scotsman*, and we notice that a special sermon was preached in one of the pulpits in protest against the views of the learned President. The title of Professor Gairdner's address was "On the Physician as Naturalist," which was treated with a high degree of ability from a one-sided point of view. The doctor of phisike in Chaucer's was much more learned *ceteris paribus* than his modern confrère. It would be a decided advantage if the lines quoted by Professor Gairdner could be applied to the learned physicians of the present day. "Well knew he the old Esculapius, and Dioscorides, and eke Rufus, old Hippocraus, Hali and Gallien, Serapion, Rasis and Avicen, Averrois, Damascene and Constantin, Bernard, Galisden, and Gilbertin." It is well to know the old writers, for with all our modern progress we cannot afford to ignore the great landmarks of the past; and the old writers who had to depend simply on observation have forestalled us, and given us advice which may be regarded as axioms. The proper balance should be preserved in the physician's attainments. Scholasticism, on the one hand, has its defects, but so has the experimental method. The scholastic is better able, from his very scholasticism, to apply the results of experimentalism, than the experimentalist without the scholasticism. There is nothing worse than dogmatism, but it is always allowed in presidential addresses: the temptation is great, more especially when the mind is religiously imbued. The moral we would draw is this: it is much better for the President of the British Medical Association to follow the advice given by Rogers the poet, advice which Disraeli thought so much of, that he plagiarised it in his novel "Lothair." Rogers was sitting at a dinner party next to an inquisitive lady. "What is your religion, Mr. Rogers," inquired his lady inquisitor? "My religion, ma'm," said the poet, "is the religion of all sensible men." "You interest me; pray what may that be?" "At such places as this, ma'm, all people keep that to themselves." As Captain Cuttle says, the bearing of these observations lies in the application thereof.

The address in Medicine by Dr. Clifford Allbutt, Physician to the Leeds Infirmary, fully sustained the high reputation he has so deservedly acquired, and justified his selection for this high honour. He chose as his subject "The Classification of Diseases by means of Comparative Nosology." "For many years," he said, "his mind had dwelt on a large conception of medicine, and in many of his earlier publications he had partially developed his ideas, which were more matured by time. He believed it to be the *novum organum* of medicine, and he took this occasion of developing his views." We fully analyse this address in another column. The third address, by Professor Macewen, dealing with a special subject—viz., the Brain and Spinal Cord, was without question the event of the meeting. The reception accorded to Mr. Macewen at the closing of his address testified in unmistakable language the value set upon his address. It is, we may here mention, a very singular circumstance that Professor Macewen has for some years been performing these magnificent operations in Glasgow, and through the silence of the press little has been known of them, whilst on the other hand a couple of operations of a similar nature, done by London men, have been heralded to the world by a great blast of trumpets, as if nothing of the kind had ever been done before. *Tout vient qui sait d'attendre* (if a man only lives long enough). Professor Macewen can well afford to look down from the pedestal on which he stands, and smile at any disposition there may have been to ignore such work as his. At the British Medical Association he spoke *urbir et orbi*, and his address may be read as a commentary upon other articles which have appeared dealing with the surgery of the brain and spinal cord. The *British Medical Journal*, of August 11th, says that his address is the most remarkable contribution to surgical literature which the present day has produced. The *British Medical Journal* further adds, "With indisputable justice may Dr. Macewen claim the proud distinction of having been the leader in this country, and we believe in the world, of this great advance in our art." Those who may have followed the London press, detailing the history of a case under Mr. Godlee and Dr. Bennett, which attracted so much attention in London in 1884, will be interested to know that all Macewen's brain cases occurred before Mr. Godlee's case, so that the tardy justice now done to this great provincial surgeon may in some ways make amends for previous ignoring of his great work. We publish in another column the abstract of his address. Sir George B. Macleod was placed at a considerable disadvantage in following Professor Macewen. His theme was a large one—"The Progress of Surgery during the last half century," a field so large that it was difficult for the orator to do justice to it in a simple address. Such retrospects are necessary; they serve as resting

places from which to survey our present position, so as to guide us in the future and show us the proper road to take. The record as described by Professor Macleod is truly surprising. It is indicated by this very fact, that Professor Macleod was the first in Glasgow to devote himself to pure surgery; now Glasgow has Buchanan, Hector Cameron, Macewen, and a number of other eminent men practising as pure surgeons. Chloroform is a glory to Scotland, and Sir G. Macleod states it is unrivalled as an anæsthetic. Hospitals came in for a share of consideration; and then the orator dealt with antiseptics, microbes, the ligation of arteries, lithotripsy, lithotomy, bladder operations, ovariectomy, laparotomy, and the other chief operations of the half century. This address, with its narration of ever-advancing triumphs, should be read in full. The last and concluding address was by Professor McKendrick, and dealt with the gaseous constituents of the blood in relation to some of the problems of respiration, and was treated in an original manner by the distinguished professor of physiology. The general meeting concluded with votes of thanks to all who had contributed to the success of the gathering, from the Lord Provost to the officials.

An interesting event of the meeting was the presentation to Dr. Ormrod of the Gold Medal of Merit for his gallant services at the St. Helens Colliery fire.

The next meeting will take place at Leeds, under the presidency of C. G. Wheelhouse. It is twenty years since this Association met at Leeds. We have a certainty that Yorkshire will unite in helping the profession of Leeds to worthily entertain the meeting, and that the Leeds gathering of 1889 will rival any preceding one.

One interesting feature of this meeting was the ceremony of conferring degrees on distinguished visitors. We must confess to a feeling of disappointment at not seeing Dr. Nathan Davis, of Chicago, president of the Ninth International Medical Congress, amongst the recipients of the honour of the LL.D. degree. It would have been a graceful action on the part of the University, and an honour fully merited. Americans will feel this, and they are pretty shrewd observers. We consider that Leeds may take a wrinkle on one point. The method of announcing delegates is not very dignified, and it would be almost as well to do away with this formal part of the proceedings, or do it in a proper way. They manage this much better in America. Those who come to our meetings, some thousands of miles, should be treated with consideration, especially the accredited delegates.

The addresses by the presidents of the sections were this year above the average, and the presidents were evidently wise—they were brief. There are two things required in an address. The speaker should have something to say; he should say it in the clearest way, and the briefest. A long address is not necessarily a good one. Little eggs are full of meat. Brevity is highly commendable for presidents. The sectional work was well maintained, the papers numerous and good, and the attendance better than we have seen it at any previous meeting. On Friday there is always a falling off. In one section there was, on Friday, the president of the section, the secretary, the reader of a paper, and one listener, all very much to be commiserated.

During the session other meetings were held, amongst the most important of which was that of the Medical Sick Benefit, and Life Assurance Society. On Wednesday, at 1 p.m. Mr. ERNEST HART took the chair. From the published report we learn that at the commencement of the year there was an available membership of 774. During the year 139 proposals were received, as compared with 129 in the previous year, and 97 in the year preceding. With the exception of six all the proposals were accepted. This left an increase of 133, against which must be set five withdrawals on payment of surrender values, four deaths, and seventeen lapses from non-payment, the net increase being 107. In the sickness fund there had been an income from premiums alone of £4,766 5s. 6d., as compared with £4,133 6s. in the preceding year. The various funds as a whole amounted on June 30th to £24,694 17s. 9d., against £17,694 3s. in the preceding year.

Mr. HART moved the adoption of the report, and pointed out that while the revenue was increasing, the expenses were decreasing, and he was able sincerely to congratulate the members on the extraordinary and uninterrupted success of the society. It had fully fulfilled its mission.

Dr. DE HAVELAND HALL seconded the adoption of the report, bearing testimony to the zeal of the chairman in furthering the interests of the society.

Dr. DOLAN (Halifax) proposed the adoption of the financial report. He said that if the members desired to increase the number of subscribers they must use their personal influence, and become canvassers. The branches were useful, but they could not depend on this method of enlistment. Such a balance sheet as the one submitted, showing accumulations year by year, was the best argument in favour of joining that could be used. They had to thank the committee who managed their money with such care and skill as to secure such dividends; their funds were invested in the soundest securities, bearing good and safe

interest. Were it not for the sound judgment exercised, and for this care, the society would not be on such a solid basis.

Mr. BRINDLEY JAMES seconded the proposal, and testified to the care with which all proposals were considered. He spoke of the interest taken in the society by Mr. Hart since its foundation.

The chairman, vice-chairmen, and committee were re-elected. A Scottish representative was added in the person of the representative for Scotland to the General Medical Council, Dr. Bruce, of Dingwall. Several questions were asked as to the disposal of any surplus funds. At the quinquennial valuation the actuary will consider this question, and submit several alternative schemes, such as lowering of premiums, bonus to old members, or the formation of a reserve fund, etc. Whatever may be done will be for the benefit of the members.

There was also a meeting of the Irish Graduates' Association, under the presidency of Dr. FAGAN. It may be remembered that at a previous meeting of the association reference was made to the fact that Irish diplomates with high class qualifications were excluded from some public appointments in England. The Irish Graduates and Schools' Association took up this question with warmth, with the result that the obnoxious clauses as applied in certain provincial hospitals were withdrawn. The subject was brought before the B. M. A. at Glasgow, and on the motion of Dr. Waters (Chester), seconded by Dr. Banks, the Association supported the resolution, and condemned the narrow-minded and intolerant policy which a few Englishmen support. The Irish Schools and Graduates' Association is to be congratulated upon the work it has done in this direction. The association is yearly increasing in influence and numbers. Could not the association have a meeting at Manchester or Liverpool some time? There are hundreds of students and diplomates from the Irish schools settled in Yorkshire, Lancashire, and Cheshire who ought to be members. London must be the centre, but an occasional excursion to the provinces would be advantageous.

The entertainments were well worthy of the Scottish people. The President on Monday entertained a number of the leading members at dinner. Private hospitality was abundant. On Tuesday the Irish Graduates Schools' Association held a social re-union at the Grand Hotel, which was attended by some of the leaders of the profession. On Wednesday the Faculty of Physicians and Surgeons gave a conversation at the University. On Friday there was a garden party at the Botanic Gardens, and in the evening at the Exhibition Art Gallery the Lord Provost and Corporation hospitably entertained the members. The Exhibition was open during the day to the members, and as the public were not admitted to the art galleries in the evening, an excellent opportunity was afforded of seeing the pictures and statuary. The Band of the Guides Belges played in the large hall. This conversation was most enjoyable.

On the invitation of the Scottish Temperance League, and the Committee of the Scottish Branch of the British Medical Temperance Association, the members of the British Medical Association were entertained to breakfast in the Queen's Rooms, Clifton-street, on Wednesday, August 8th, at 8 a.m. Sir WILLIAM COLLINS, president of the Scottish Temperance League, who occupied the chair, said that during the forty-three years that had passed since the League was established, it had had the support of many accomplished physicians and surgeons. Of 600 cases of typhus fever treated by Professor Gairdner in the infirmary, the mortality among patients treated with alcoholic stimulants amounted for all ages to 17.2 per cent., whereas among those treated with milk and other milder substitutes the mortality fell short of 12 per cent., and in the case of young people was less than one per cent. Addresses were also delivered by Professor M'Kendrick, Glasgow; Dr. Carpenter, Croydon; Dr. Norman Kerr, London; Canon Barker, Dr. Young, Edinburgh, and Prof. Geikie, Toronto.

There was a breakfast at the Royal Infirmary, at which about 150 attended, and where a number of operations were shown all of a unique nature, and illustrating new departures in surgery. Dr. Macewen entertained a number of visitors to whom he explained his methods of operating in hernia, and his treatment of bone injuries. He exhibited the patients on whom he had performed operations, preserving for them organs which had been mutilated, and which a few years back would have been amputated. The wonderful results obtained by Dr. Macewen were the subject of comment and congratulation, and it is to be hoped in the interests of humanity he may long be spared to further advance that branch of medicine for which he has already done so much. It is not alone in daring and brilliant surgery that he excels—the common accidents of every-day life, as fractures, etc., the deformities which render life almost unbearable to those afflicted, receive at his hands an equal degree of attention. His osteotomies and his conservative surgery add as much to his fame as the rare operations with which his name is now associated. The glory of a surgeon lies not alone in the number

of operations he has performed, but in the number of operations he has prevented from being performed.

Dr. WOLFE gave his first demonstration of his method of extraction of cataract at the Ophthalmic Institution, on Tuesday, August 7th, in the presence of a number of oculists, both of London and the continent. About twenty years ago he published, in the *Lancet*, his improved method of extraction of cataract, shown in the result of one hundred and seven cases. The leading feature of his method was the elimination of all the elements of risk, and the rendering of such a delicate operation as safe as possible. He has since gradually improved upon his method, and claims for his procedure the merit of being almost a harmless operation. Dr. Wolfe has frequently brought his method before the notice of the profession in the columns of the *Lancet*, the *British Medical Journal*, and in some of the foreign ophthalmological journals. He also initiated a discussion on the subject at the meeting in Belfast. Various oculists from America and also from the continent have visited the Ophthalmic Institution, and have witnessed him performing the operation, and have spoken with the highest praise of its merits. Professor Hirschberg, the editor of the *Centralblatt für praktische Augenheilkunde*, for instance, stated that he has witnessed in Glasgow Dr. Wolfe's artistic and safe operation. It was therefore natural that he should embrace this opportunity of showing to the members how his method is carried out. He operated upon eleven cases, just as they presented themselves. Some had deeply sunken eyes, one had his eyebrows so prominent that the puncture and counter puncture could be performed only with very great difficulty; others suffered from deafness, so that they could not easily be made to understand how to rotate their eyeballs; and yet, in all these cases, the results have been eminently successful. It may be said that the work passed off practically without a single hitch. There was no escape of vitreous, no protrusion of the iris, and none of those numerous accidents which we generally read of as occurring in that operation, even in the hands of the best operators. The sight of every one of the patients was tested immediately after the operation, when they could count fingers and recognise features; the pupils looked black and clear. There was one exception, the case of a female patient, who could not see distinctly, notwithstanding the clearness of the pupil. The cause was afterwards discovered, a thin layer of cortical substance had remained behind, which is now in process of absorption, the eye being perfectly quiescent. The time occupied in the demonstration was just two hours. Four of these patients had previously been operated on for the other eye, so that among the eleven there had been fifteen extractions all attended by success. The results thus obtained are the more remarkable, as Dr. Wolfe gives neither chloroform or cocaine, but trusts entirely to his manipulation, which he carries out in such a manner as to render it almost painless and safe. He explained to the meeting that his objections to cocaine are—*Firstly*, that it renders the tissues white, so that sometimes it is difficult to see the point of junction of the cornea with the sclerotic. *Secondly*, as it is essential to the healing by primary union to have all the tissues in a physiological condition, he objects to put them in a pathological state. *Thirdly*, that the drug is not altogether free from danger, and has in many cases already manifested its toxic effects. Dr. Wolfe said that notwithstanding the hysterical condition into which some of his eminent friends have been thrown by the discovery of cocaine, he restricts its use to exceptional cases, but, as a rule, dispenses with its application.

The second demonstration was given on Aug. 10th, at the Ophthalmic Institution, in the presence of a numerous audience, both English and continental, on the subject of the transplantation of conjunctiva from the rabbit to the human subject, for the cure of symblepharon. The subject operated on was a furnace-man in an iron-works, who had his eye burnt with a hot rivet, which caused partial adhesion of the lower eyelid to the cornea. Dr. Wolfe dissected the adherent lid from the cornea and sclerotic, measuring the exact extent of the conjunctival *cul-de-sac*; he then rendered the surface smooth by means of a pair of scissors, freeing it from all nodules. The rabbit was then put under the influence of chloroform, and the conjunctiva taken from the portion of the membrana nictitans down to the cornea, a black suture being inserted in the centre of the removed flap, in order to mark the external from the internal surface. The conjunctival flap was then spread out on the dorsum of the left hand of the operator, and allowed to dry there. This is then removed in the dried state by means of a fine spatula, and placed upon the raw surface of the patient's eye, and secured by means of several fine black silk sutures. To show the satisfactory result obtained from this operation, Dr. Wolfe showed a patient on whom he had thus operated just six days previously, some of the sutures being still in the conjunctival flap. This patient had lost one eye years ago, which was knocked out by a hammer, and in January, 1888, had the remaining eye burnt with molten iron,

producing almost total adhesion of both upper and lower eyelids. By dissection, only a small portion of the cornea was discovered as having remained transparent. Opposite that portion Dr. Wolfe made an artificial pupil, then, by two subsequent operations, he replaced the conjunctiva of both upper and lower eyelids (from the rabbit), with the satisfactory result that the eyeball is movable in all directions, and the patient can see features distinctly, and is able to move about without help. Dr. Wolfe said that it is now about fifteen years since he first suggested to the profession this operation of transplanting conjunctiva from the rabbit, and, notwithstanding its invariably successful results, some surgeons still cut conjunctiva from the same eye, or mucous membrane from the lip; and (horrible to say) one German surgeon recently reported that he had removed the mucous membrane from a woman's vagina in order to repair symblepharon, when a rabbit can be had for a shilling.

The Annual Museum.—The twenty-first Annual Museum may be pronounced one of the best ever formed. One disadvantage there was; the exhibits were too crowded. Some exhibitors could not display their manufactures to advantage.

The Section devoted to medicines, foods, etc., was conveniently situated, and as you ascended the large staircase, the eye was at once met by a prize cabinet, specially designed by Messrs. JOHN RICHARDSON & Co., of Leicester, for private dispensing. It was made of highly polished pitch pine, and with its array of bottles it tempted the purchaser who wanted a convenient, and at the same time, an elegant piece of furniture for his consulting room. With its number of drawers and contrivances, etc., this cabinet was unique, and we were informed could be supplied fully fitted with medicines for the sum of fifty guineas, which, considering its completeness and elegance, was certainly most reasonable. Passing on, the eye next fell on a magnificent collection of pharmaceutical products. Pearl-coated pills have now reached almost their highest state of perfection, and the bottles were so tastefully labelled, and the pills looked so tempting, that medicine was robbed of its terrors. No one can now say "Throw physic to the dogs" in the face of such delicately coloured pills and perles. The contrivances for carrying pills and tablets on this stall were innumerable; they were of all sizes and shapes. The special exhibits, as thymol preparations, peptocolos, tablets, were much admired. This stall was also fitted up by Messrs. RICHARDSON & Co., Leicester. On the same landing were copies of the *Provincial Medical Journal*, and copies of the volumes "Contemporary Medical Men." Numbers stopped to admire the lithographs, and praise was liberally bestowed on the artist. For lithographic execution these likenesses cannot be excelled.

Entering the room on the right was the stall of Messrs. SAVORY AND MOORE (London). This was chiefly remarkable for their medical cases, and for their army medical equipments. They had several of their well-known specialties also on view. FERRIS & Co. had a very large space devoted to them, but, as surgical instruments were also shown, it took away from the effect.

CHAS. GREEN & Co., Tower Chambers, Moorgate, London, E.C., had a well-arranged exhibit of their unalterable hypodermic solution, of about forty different medicaments, which included those in everyday use, as well as some of the rarer and finer alkaloids, such as sparteine, eserine, coniine, hyoscyamine, duboisine, etc.; also an attractive and useful hypodermic case, which contained a syringe and electroplated screw-capped bottles (for their solution), into which their syringe exactly fits. They also exhibited liquor ergotæ (Green's), and liquor cascariæ (Green's), both of which they prepare by a process of fractional percolation, at normal temperatures. Their exhibit also contained many other preparations having a pharmaceutical interest, such as rectal and vaginal pine medicaments, containing iodoform, ergotin, coniine, atropine, morphine, etc., etc., made with cocoa, butter, and an antiseptic (*Pinus pumilio*) base.

Messrs. HEWLETT & Co. had an excellent assortment; close by whom were Messrs. SCHACHT, who showed some novel and useful preparations. Messrs. BURROUGHS & WELLCOME had a stall across the room, on which were arranged nearly all their specialties, lanoline, pinol, salol, etc.

A little further down the room were Messrs. CHRISTY & Co., so well known as the introducers of so many rare drugs. They had a well-arranged stall, on which were to be seen the crude medicinal article and the refined preparations. They showed some excellent specimens of sozoidol, the substitute for iodoform. Sozoidol is a compound of iodine, carbolic acid, and sulphur, and is in the shape of colourless tubular crystals, dissolving readily in water, in one to twelve. It is perfectly odourless. Having been used largely on the Continent, and practically tested, it promises to drive out of the field iodoform. Messrs. Christy also showed us their anthropophors, coated spring bougies. These consist of a spiral spring, 5 to 6 inches in length, terminating at one end in a large ring. The bougies can be coated with any medica-

ment. They have been used for some time in America and Germany for gleet, and in England have been tested at St. Peter's Hospital, London. Anthropophores are really medicated lozenges. We were able to taste their kola-chocolate, which was a very agreeable preparation; and their eucalyptus honey, said to be produced by the black bee of Australia.

Messrs. HOCKIN, WILSON & Co., London, exhibited their specialties, salix nigra and liquor podophyllin, of which we have already spoken in high terms in this journal.

Messrs. ALLEN & HANDBURY had also a good exhibit, and so had Messrs. CORBYN, STACEY & Co.

The GLASGOW APOTHECARIES' COMPANY, Messrs. EVANS, SONS and Co., Messrs. M'MILLAN, SACKER, SCHIEFFELIN, SYMES & Co., and WARNER, also had pharmaceutical preparations on view.

We have begun rather at the wrong end, because it was possible at the exhibition to be dieted scientifically, to wash down the samples with Hungarian wine, coca, champagne, nourishing stout, and then to take a few aperient pills, tablets, or parvules, to prevent any ill effects accruing from the too liberal distribution of samples. The various foods, as those of Nestlé, Læflund, Henderson, Scott & Co., Gray, Dunn & Co., could be tested, as well as the beef essences of Mason, Brand & Co. Those who liked malt extracts could taste the well-known preparations of Hoff, Maltine Co., Kepler, as there was an *embarras de richesses* in this line.

The Hungarian wines of Max Gregor came in for a fair share of attention; their well-known brand, Carlowitz, still and sparkling, was highly appreciated by those who were wearied of listening to long-drawn debates or the bores of some of the sections. Carlowitz is one of the best wines that can be supplied for the invalid; and as the price is so moderate, and the wine keeps so well, it is especially marked out for the sick room. Carlowitz is a pure wine, and as it has a good body, its properties give it an advantage over the thin clarets of the market. We can specially recommend Carlowitz selected.

Australian wines appear to be growing in favour. Messrs. COLIN C. HODGE, Glasgow, exhibited some excellent samples produced in this new wine growing country.

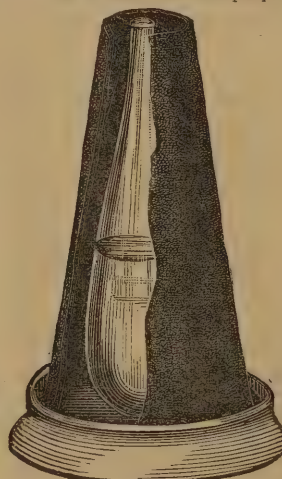
M. FARMER, Glasgow, dispensed a nourishing stout, which possessed some special properties which renders it suitable to persons suffering from a weak digestion.

Teetotalers were able to inspect the mineral waters supplied by Messrs. INGRAM & ROYLE, London, as Carlsbad, Contrexeville, Vichy, Rosbach.

Hartman's wood wool wadding, manufactured by the SANITARY WOOD WOOL COMPANY, in the United Kingdom, is an excellent dressing.

The SANITAS COMPANY had a display of their antiseptic and disinfecting apparatus. This stall ought perhaps to have been in the sanitary section, which was contained in some special tents erected in one of the quadrangles of the University.

The sanitary section was weak. The CHEMICAL CARBON COMPANY, Holborn Viaduct, London, kept this section well purified by burning almost continuously some form of their carbon cones. These cones have been devised for the purpose of throwing off medicated vapours,



No. 1.—Showing Flask.



No. 2.—Showing Cone Lighted.

and, as may be seen from our illustration, they consist of an outer casing, enclosing a small glass flask, in which is placed the substance desired to be volatilised. They are a great improvement on the old fashioned pastile, which was simply a toy. By this method, not only can deodorization and disinfection be carried out, but vapours can be

applied therapeutically. The cones may be divided into two classes—perfumes and therapeutical agents, as in the following lists:—*Medicinal*, carbolic, carbolic and lavender (house), carbolic and lavender (hospital), thymol and lavender, camphor carbol, calomel, pinus sylvestris, oxygen, calomel, sulphurous, mercuric chloride, iodine, chlorine, tar, ammon. chlor., terebene, carbolic et iodum, terebene et iodum, creasote, bromo eucalyptus. *Scents*, ylanglang, heliotrope, stephanotis, white rose, violets. The last series can be readily tested. If we select one of the perfume cones, as Jockey Club, violets, frangipane, and set it on fire, the room becomes very soon filled with the distinctive odour of the scent. The same test, the sense of smell, may be applied to some of the medicinal cones, as those containing carbolic acid, iodine, or sulphurous acid, the atmosphere being speedily filled with the distinguishing odour of these substances. These are simple tests, but something more is required to test their medicinal value. We may purify a room by burning these cones; of this we think there cannot be a doubt. We can deodorize a room. We have repeated the experiments already performed with them—viz., testing one of them as to its power of concealing the odour of a close stool. The stronger aroma kills the weaker. What we allude to applies to the medicinal value of these cones, and has to be worked out on other grounds. Suppose we wish to treat the patient medicinally, to administer a vapour to a patient with whooping cough. How much of the medicine contained in the flask is given off in the air? What size of room is it to be burnt in? How many cubic feet of vapour are given off by a cone? There are many other questions of a similar kind which may be asked, and the best test is the test of experience. The calomel cone must be tested on a syphilitic patient, and the mercurial and sulphur cone in parasitic skin disease. We believe that this has been done. We have received a number of the cones for independent testing, and we hope shortly to publish a report on the results we have obtained.

DOULTON & Co., so well known for their sanitary appliances, had a good selection.

Dessicated soups, milk in powder, digested tea, Dunn's biscuits, and gluten products, found themselves in association with ambulance wagons, wire mattress beds, invalid chairs, bed rests, stretchers, doctors' ulsters, and doctors' broughams.

Messrs. HENDERSON & Co., Glasgow, exhibited a beautiful brougham. It was light and yet solid. The upholstery of Genoese velvet gave it a luxurious appearance. The carriage was hung on long yielding springs, and the fittings were all in character. There was a concealed cabinet cupboard, in which books, instruments, etc., could be placed, and special provision was made for ventilation. Close by was an ambulance carriage, opening from the back, a much more pleasant looking vehicle than the one in common use.

The GLASGOW AMBULANCE ASSOCIATION had on view a number of improved stretchers and emergency cases.

Section E, devoted to surgical instruments and appliances, books, etc., was a little out of the way. There was an excellent display of surgical appliances shown by HILLIARD & SONS, of Glasgow.

Messrs. BECK had a magnificent assortment of microscopes, ranging from the students' up to the magnificent and expensive instruments, for the production of which their firm is so famous.

Messrs. CROUCH, London, showed their new biologist stand, especially constructed for use of their highest powers for bacteriology, as well as a number of improved microscopes.

FRASER, of Edinburgh, exhibited an apparatus for bacteriological and physiological research.

In surgical instruments there were a number of exhibits by ARNOLD and SONS, DOWN BROTHERS (London), GARDNER (Edinburgh), and CORCORAN (Dublin).

JOHN WEISS & SON (London), MAYER & MELTZER were in strong force, and Messrs. PICARD and CURRIE showed their specialities in connection with diseases of the eye.

In the book department Messrs. H. K. LEWIS, Gower-street, had an assortment of their best works, and this department was also represented by MACMILLAN & Co., MACKLEHOSE & SONS, HOLMES (Glasgow), YOUNG PENTLAND (Edinburgh), GEORGE REDWAY, JOHN WRIGHT and Co. (Glasgow.) Messrs. STENHOUSE exhibited a number of Churchill's works, and they exhibited the American mannikin, by means of which anatomy might be studied.

The office batteries of SCHALL's were very much admired. On this stall were to be seen almost every variety of instrument for galvanisation, galvano-cautery, electrolysis, electric light, etc.

The exhibit of pathological specimens was very large, and included specimens exhibited by Drs. Coates, Hector Cameron, Professor Buchanan, and Dr. Samuel Moore. Dr. DAVID NEWMAN exhibited specimens of so-called surgical diseases of the kidney. Dr. JOHN LINDSAY STEVEN exhibited a number of specimens illustrative of diseases of the heart. Dr. BEAVEN RAKE showed a series of specimens

showing changes and inter-current affections occurring in epilepsy. Drs. NORRIS WOLFENDEN and SIDNEY MARTIN exhibited drawings of microscopic sections of laryngeal growths. Dr. COATES' selection embraced specimens of embolism and aneurism of cerebral vessels, tumours of the brain, etc. It is impossible within our space to do justice to all exhibitors at the Annual Museum, and we have been compelled to make selections.

The satisfaction felt by the exhibitors with the arrangements made for their comfort was expressed by the presentation to Dr. R. S. Thompson, Secretary of the section for foods and drugs, of a complete set of Ziemssen's Encyclopædia of Medicine. The address was presented on Friday, August 10th, and his words of reply will be welcomed by all pharmaceutical exhibitors. He said, "He looked upon pharmacy and pharmaceutical chemists as a very important branch of the meeting, and should be glad when the time came to have all pharmacists enrolled as members of the British Medical Association, so that they might enjoy the full privilege of the meetings."

Surgical Aids and Appliances.

105.—DR. LEWIS H. SAYRE'S CUIRASS, WITH HEAD EXTENSION.

In the *Provincial Medical Journal*, August, 1888, p. 359, we published a paper by Dr. Sayre "On the Plaster-of-Paris Jacket." The illustrations did not arrive in time to be included with text. The cuirass may be seen from the illustrations we now print, and the other cuts speak for themselves.



Medical Miscellanea.

THE subject of our next illustration will be Dr. Burney Yeo.

Woodhall Spa is being made into a limited liability company.

The late Mr. J. Harrison (Reading) has left £40,700 6s. 1d., giving away in charity £6,000. He left £500 to the British Medical Benevolent Fund.

There were two errata in Dr. Saundby's communication in our last issue. Dr. Saundby is a *teacher*, not a master. For *tablespoonful* read *teaspoonful*, in last paragraph.

A fund is being raised for the British Beranger, Dr. Charles Mackay, now in his 73rd year, and in broken health. Dr. Alexander, Putney, London, S.W., will receive subscriptions.

In the *Bulletin Général de Thérapeutique*, July 30th, 1888, Dr. L. H. Petit does full justice to the original observations of Dr. Alexander Harkin on the nature and treatment of epistaxis. We shall in our next issue allude to Dr. Petit's paper.

The Queen has granted a charter to the Order of St. John of Jerusalem (the parent of the St. John Ambulance Association), becoming Sovereign Head and Patron; the Prince of Wales is Grand Prior, and Prince Albert Sub-Prior. The Prince of Wales has become President of the St. John Association.

Director-General Sir John W. Reid, K.C.B., M.D., Honorary Physician to the Queen, has been awarded the Good Service Pension of £100 a year for Inspectors-Generals of Hospitals and Fleets, vacant by the death of Inspector-General H. J. Domville, from the 10th ult. Sir John Reid served in the Crimean, China, and Ashantee wars.

LYTHAM COTTAGE HOSPITAL.—The last report of the committee of the Lytham Cottage Hospital and Convalescent Home shows that without some special effort the work of this beneficent institution is likely, ere long, to be cramped for want of funds. The Hospital, which is situated within easy walking distance of the town, yet practically isolated, was erected and furnished by the late John Talbot Clifton, Esq., for the accommodation of the poor resident in the district, when suffering from sickness or accident. In 1882-3, on account of the limited accommodation, the building was enlarged, at a cost of nearly £700, and it was then decided to extend the benefits so as to allow of patients from other districts being admitted. In taking that course, the committee naturally anticipated that they would receive considerable outside support to recoup them for the increased advantages afforded. They seem, however, to have been disappointed in this hope, and last year's working shows a deficit of £117, the committee are reluctantly compelled to recommend a return to the old system of admission. During last year 107 patients were received at the Hospital, only thirty-nine of whom belonged to Lytham. The remainder were from Liverpool, Manchester, Bolton, Preston, Blackburn, Haslingden, Blackpool, and more distant places. Under the direction of a strong local committee, with the aid of the medical gentlemen of the town, Dr. Fisher being the honorary medical superintendent, the Hospital is admirably administered. In these circumstances it would be a matter for extreme regret if an institution capable of conferring such great benefits should be allowed to languish for want of adequate support.

UNIVERSITY OF ABERDEEN.—GRADUATION IN MEDICINE, 1888.—The following candidates have received degrees in medicine and surgery:—*The Degree of M.D.*—Francis A. Bennet, M.A., M.B., C.B., Victoria, Australia; John Glaister, M.B., C.M., Putney, London; John Gordon, M.B., C.M., Aberdeen; Thomas Wardrop Griffith, M.B., C.M., Leeds; A. Cayley Hutchinson, M.B., C.M., West Brighton; John Jenkyns, M.B., C.M., Belize, British Honduras; Alexander W. Knox, M.B., C.M., Great Yarmouth; William Lawson, M.B., C.M., West Bromwich, Staffordshire; John Russell, M.B., C.M., Arbroath; James Savege, M.B., C.M., Swanscombe, Kent; James Struthers, jun., M.B., C.M., Aberdeen; William R. Tough, M.A., M.B., C.M., Crook, Co. Durham; Alexander Wilson, M.A., M.B., C.M., Midcalder. [The theses of John Gordon, T. W. Griffith, and James Struthers were considered deserving of highest honours.] *The Degrees of M.B. and C.M.*—George Allan, Fife-Keith; Alfred Barber, Harrogate, Yorkshire; John Barclay, Duneeht; John Urquhart Black, London; Geo. J. Buchanan, Punjab, India; Robert H. Cook, Aberdeen; Robert Cuming, Duthil, Strathspey; Wm. Diack, Aberdeen; Archibald Dingwall, M.A., Aberdeen; James Don, Culter; Alexander L. Duke, Arbroath; Spencer S. Dunn, Adelaide, S. Australia; John Geo. Durran, Caithness; Robert Eatough, Brindle, Lancashire; Richard A. S. Eden, Aberdeen; Austin Dowling Ellis, Aberdeen; Geo. S. P. Ferdinands, Colombo, Ceylon; John G. A. Forsyth, Abernethy; Alexander R. Galloway, M.A., Inverurie; Geo. Gibb, M.A., Aberdeen; Reginald J. Gladstone, Old Aberdeen; George Gordon, Huntly; Cormack Grant, Caithness; Robert Grant, Tomintoul; Adam B. M. Gunn, Caithness; Bernard A. Heathcote, Ilfracombe, Devon; Thomas W. Illingworth, Scarborough; John Joss, M.A., Huntly; Arthur Keith, Turfiff; Frederick T. Keyt, Colombo, Ceylon; David A. F. Kydd, Pollockshields, Glasgow; Alfred Leach, London; Thomas Macallan, Midmar; George Macdonald, Forres;

Alexander F. Mackenzie, Nairn; William Leslie Mackenzie, M.A., Alness; William Mackie, M.A., Chapel of Garioch; Jas. C. Mackintosh, Inverness; Robert Gordon M'Kerron, M.A., Aberdeen; William Masson, Aberdeen; George Michie, M.A., Aberdeen; William R. C. Middleton, M.A., Aberdeen; Geo. Colville Milligan, M.A., Guthrie; James Milne, Botolphine; David Duke Monro, Brechin; John Packer, Thirsk, Yorkshire; Thomas Moir Rae, M.A., Udney; John S. Riddell, M.A., Aberdeen; Alexr. Robertson, Stonehaven; Percy Austin Roden, Droitwich, Worcestershire; George Robert C. Russell, Orkney; Alfred M. Saunders, M.A., Woodside; William St. John Skeen, Aberdeen; Richard M. Townsend, Cape Colony; Alick Murray Will, Aberdeen; Arch. S. Williamson, M.A., Banff; Robert Gill Wyllie, Newhills. The following gentlemen graduated with honours:—*Highest Academical Honours.*—Arthur Keith. *Honourable Distinction.*—Cormack Grant, Thomas W. Illingworth, William Leslie M'Kenzie, M.A.; Robert Gordon M'Kerron, M.A. *The John Murray Medal and Scholarship* given to the most distinguished Graduate of his year has been awarded to Arthur Keith. *The Diploma in Public Health* has been conferred on the following Candidates:—Alfred Cornwall Ferguson, M.A., M.B., C.M.; Reginald J. Gladstone, M.B., C.M.; Walter G. King, M.B., Surgeon-Major, with Credit; Alexander F. Mackenzie, M.B., C.M.; George Rose, M.B., C.M.; Alfred M. Saunders, M.A., M.B., C.M.; Francis A. Van Der Smagt, M.D.

Correspondence, Notes, and Queries.

Communications, Books, etc., should be addressed directly to the EDITOR, "The Provincial Medical Journal," Horton House, Halifax.

Matters of business should be addressed to the Publisher, at the Offices, 10, Friar Lane, Leicester; or to the London Representative, Mr. E. BELLA, 58, Charing Cross Road, W.C., to whom all communications respecting Advertisements should be addressed.

We cannot undertake to return rejected MSS. unless stamps sufficient for their postage are enclosed.

We shall be glad to receive reports of Medical Vacancies, Appointments, Meetings of Societies, etc.

Papers containing passages for consideration should be marked.

Correspondents must please attest their communications with their proper name and address (not necessarily for publication).

Contributions must be written on one side only of the paper.

MSS. intended for publication to be sent in not later than the 16th of the month.

The insertion of any letter in these columns cannot be taken as necessarily indicating our adhesion to the views or statements therein expressed. The same remark applies to articles to which a name or nom-de-plume is attached.

PROFESSOR DE CHAUMONT.

To the Editor of "The Provincial Medical Journal."

SIR,—Your portrait of my friend and colleague, Professor de Chaumont, in to-day's number of the *Provincial Medical Journal*, is a melancholy proof of the uncertainty of life. No man deserved more of his country than did Dr. de Chaumont, and seldom has anyone been treated more scurvily by the powers that be. His grand services on behalf of sanitary science are unrewarded, and the scanty pay awarded to his widow will not suffice to enable her to educate the large family which the noble hearted doctor has left unprovided for. Unsuspicious and confiding in his own nature, he was peculiarly liable to be imposed upon by others, and, as a consequence, the investments which he made to provide for his own have all been lost, and a scanty pension of £90 a year is all that Mrs. de Chaumont can legally look to for her future maintenance.

May I ask of those who have influence with the Government, to urge upon the powers that be the injustice of leaving the orphans of one who gave up his life in the desire to save the lives of others in so dependant a position.

Surgeon-General Maclean asks all subscribers to the Medical Benevolent College to assist him in the election of one boy into the Epsom College; may I also support Surgeon-General Maclean's appeal.

Duppas House, Croydon,
August 1st, 1888.

ALFRED CARPENTER, M.D.

ARMY MEDICAL MEN.

To the Editor of "The Provincial Medical Journal."

SIR,—It may do no harm to let you know what one of the medical profession thinks of all the backbiting and abuse of the medical staff of the army constantly going on in military circles and papers. It seems to be forgotten that medical men are trained to be observant and watchful, and that the marked animus and ill-feeling displayed by many military officers when speaking of that portion of the profession serving in the army, must have some cause, not evident on the surface, as many of the charges are on inquiry found to be exaggerated, or distorted by bilious criticism. It is convenient, as usual, to put all the blame on the doctors, and lay all the fault at their door. But is this the whole truth, the real cause? Not so, according to my own experience, backed up by that of many other medical officers, some of whom have been studying the question, and the reasons of the frequent and indiscriminate abuse levelled at the doctors for many years. But before doing so let me ask, is it not wonderful that we never hear any good word spoken of the medical officers of the army, by those combatant officers who make themselves the mouth-piece and spokesmen of the frequent "hard-to-be-believed" charges against them—surely all cannot be bad, worthless, ignorant and useless, as many critics would lead us to believe. Are there none thought worthy of a good word? But to the point. Study of the subject for a quarter of a century has led me to the following surmises, much to my regret, that a great part of the mud thrown at the medical officers of the army is, I am sorry to say, thrown for a purpose. What is it?

1st. To try to induce the authorities to re-introduce the "regimental medical system," and thus "wheel the doctors into line," according to military ideas. If this is the object no way more likely to defeat it could have been devised than going in for indiscriminate abuse of the medical officers, which has been so perseveringly indulged in, widening the breach between the military and medical classes and masses almost beyond repair. This is evident from the reiterated complaints against the present military hospital system, and of the gross carelessness of the staff medical officers.

2nd. A wish to curtail the pay and privileges of the doctors, who it is plain to be seen are, by many, thought to be too well paid, and treated also too liberally compared to their combatant "superiors." A suicidal policy, as proof after proof has been given that medical men of ability will not enter unless decently paid and (what many seem to forget) decently treated as members of a liberal profession.

3rd. To endeavour to prove to the world at large, as well as Her Most Gracious Majesty's advisers, that army surgeons are quite unworthy of, and unfit to hold any proper military rank or position in the army.

I am only too well aware there are, unfortunately, some few medical men in the army, who are neither worth the pay they draw, nor fit for any proper military rank or status. But why take such men into the army? If the profession had a proper position and just treatment, it would be easy to keep undesirable candidates out of the army. That is what many officers leave out of sight. Our combatant ranks even are not entirely free, as many will allow, from undesirable individuals as officers. But the mischief is that the doctors are "played fast and loose with," so that the War Office is obliged to take in some undesirable men, *volens*. Another point: *Why is it that so many army surgeons are only too glad to take their pension, and leave the service in the prime of life?* That subject, if fully answered, might afford food for reflection for many combatant critics, and all who have the efficiency of the army really at heart. Something must be rotten in the state of Denmark when medical men, who have done excellent service, and proved themselves not only "good doctors," but efficient and pains-taking army surgeons, prefer to re-enter civil life and sever their connection with the service rather than remain on. I leave you, Mr. Editor, to try to elucidate this subject, as one of great importance to the British Army, as well as the medical profession generally.—Yours truly,
M.D.

THE PROFESSION AND CERTIFICATES OF DEATH.

To the Editor of "The Provincial Medical Journal."

SIR,—The difficulty your correspondent mentions in the case of inebriates may, I think, be got over by writing after the proximate cause of death and in the same line *à potu*. It would be hardly noticed, and, if it were, could be passed over as a special definition. People who read Latin rarely, or never, belong to the class which criticises the wording of a death certificate; but we ought in all cases try to spare all unnecessary pain to the relatives.

Respectfully yours,

A MEDICAL OFFICER OF HEALTH.

NEALE'S "DIGEST."

To the Editor of "The Provincial Medical Journal."

SIR,—If "F.R.C.S. Exam." has so little appreciation of the value of Neale's "Digest" as to put it in the dust-bin, I wish he would give it to me, for I know plenty of people who would like to have it. Now that this work can be had at a reasonable price, I should suppose that most medical men will be only too glad to get it, a useful hint being often obtainable, even without any files of journals. As an example, I suffer with sciatica, and am glad of all the information I can get about it. I look up the "Digest," and I there find, besides references to writers, *causes*—sitting on edge of chair, abdominal aneurism, gonorrhœa, syphilis, glycosuria, neuritis in phthisis; *treatment*—diet, guaiacum, hypodermic (bad), aqua puncture, gelseminum, scapale, atropine, chloroform (hypod.), ol. tereb., ether (hypod.), quinine and opium (unfailing), copaiba resin, menthol, ol. croton., ammon. chlor., electricity, heat, pot. iod., chloral, act. cautery, ditto of external ear (speaks rapturously), argent. nit. (hypod.), sandbath, phosphorus, sod. salic., ac. sulphuric over nerve, sulphur externally, plasters, Sterry's poor man's p., nerve stretching, ditto (no cutting), menthol (a charm), electricity direct, osmic and hyperosm. acids, methyl spray (specific), argent. nit. (hypod.), Bath waters, dry cup, nerve stretching (bloodless), extension, mechanical vibration. Now, I venture to think that there are few practitioners who have absolutely nothing to gain from the above list, especially when each one of these causes and remedies may be itself turned up in the "Digest" and in any books of reference at hand, and further information obtained.
T. MAXWELL.

Woolwich, Aug. 11th, 1888.

BRIBERY.

To the Editor of "The Provincial Medical Journal."

SIR,—I see that Lord Randolph Churchill is introducing a Bill to punish bribery on the part of corporation servants and other bodies, and that the chief Registrar of friendly societies is also at work in the House of Commons shewing that the practice of insuring children with collecting friendly societies, tends to familiarise the idea of their children's death in minds of the parents. Both of these gentlemen will receive a letter this morning from myself demonstrating that the insurance of children should form part of the postal department of the country, as suggested by Mr. Ludlow, that as a medical officer for clubs, I could testify that I had known low and ill-bred parents refuse to give medicine to their sickly children day after day, that I had heard such parents attempt to justify their negligence on the ground that discouragement in prospect attended the raising of offspring, and, moreover, that I had known parents to comment on the utility of the money before receiving it; that therefore no person under eighteen years of age should form a member of any friendly society. These gentlemen I assured that the medical aid connected with this town had been for nearly half a century little more than a deception, and in innumerable instances, virtually, a means of taking life. It could not be otherwise, as the pay of the large burial societies to their medical officers only amounted to one tenth of what it should be, though the members received consultations, medicines, and visits for a paltry remuneration, they believed, one and all, that their medical men should be subject to their bidding, and even submit to their domineering all the day, evening, nighttime, week-day and Sunday. I can say that the officers of the burial societies, as a rule, were unprincipled, and that they demanded bribes from their medical officers. That the medical aid of all friendly societies should be under State control in regard to the fixing of the minimum of remuneration of their medical men. That as these clubs never would pay too much for medical services, any president, secretary, committee-man, or other officer being convicted of receiving a bribe in money, great or small, or of moneys worth, from a medical officer of a club, should empower a bench of Magistrates to inflict a fine of £5 at least, and £10 at the most on the offender, or imprisonment in case of failure of paying the fine. Repetitions of offences to be punished more severely. It may be stated beyond all doubt that a generality of the officers of clubs will exert themselves to the uttermost, make use of any means, good or bad, for the expulsion of any medical officer who will not give to them a share of his hard earnings. This they will do irrespective of his being skilful and kind to the members. To the representatives afore mentioned, I suggested that no president or chairman of a quarterly or other general meeting should have the power to close a meeting. And that the termination of the proceedings be resolved by a vote of the members present, and that the law should be amended making compulsory a yearly returns of the medical accounts as well as the burial. It is a perfect marvel to see how medical men are affected with apathy, and as a body totally ununited while the people at large are busily engaged in

the work of forming organisations to monopolise our services for next to nothing by way of recompense. Not one person in a thousand has the slightest regard as to how a medical man shall subsist. No doubt it is a great mistake on the part of medical men to have a mania for figuring as servants free of charge to hospitals and other charities. As the publicans waste millions yearly on worthless intoxicants, what can be more reasonable than that medical men should be paid for saving peoples lives? There is still another reform which has been broached time and again in the *Provincial Medical Journal*, i.e., it is absolutely necessary general practitioners should form a great preponderance in the medical council. As mere representatives of medical schools and consultants, and wealthy men in that body are entirely removed from feeling the necessity of such reforms as will remedy the prolonged grievances of the hard-worked and poorly paid general practitioners.

A CLUB DOCTOR.

MEDICAL BOYCOTTING.

To the Editor of "*The Provincial Medical Journal*."

DEAR SIR,—In an article on "Medical Boycotting," in this month's *Provincial Medical Journal*, I see it stated that "in Bristol, the obnoxious clause, excluding Irish graduates with high-class degrees, was expunged." Now sir, it may be true that the clause referred to has been expunged from the *printed* regulations of the Bristol Hospitals, but *practically* it is not so, as I chance to know, that at a recent election for a medical officer at the Bristol General Hospital, canvassing was done for an English candidate, and it was stated to the gentleman who informed me of it, that men with Irish qualifications were no good, that any man could go over to Ireland and pass there, even after having been "plucked" in London.—I remain, Sir,

Yours obediently,

M.D., Q.U.I.

Northamptonshire,
August 1st, 1888.

SEA-SICKNESS.

To the Editor of "*The Provincial Medical Journal*."

SIR,—Various theories have been advanced to explain the cause of sea-sickness. I offer the following: The cranium being a tightly-closed cavity, incapable of expansion, any sudden and rapid downward movement, such as rolling, will have a tendency to prevent the flow of venous blood through the internal jugulars from the base, whilst the supply remains constant through the arteries. The resulting frequently-repeated pressure upon the cranial contents excites nausea.

Some persons are troubled with nausea, and even vomiting, when sitting with their backs to the engine whilst travelling on the railway. The anatomical peculiarities of the chief cranial venous exits may account for this. The anterior walls of the jugular foramina, as formed by the jugular fossæ, rise in the cranium to a higher point than the posterior, thus offering solid resistance to the column of blood as it leaves the base of the skull in a forward direction. The rapid and constant backward movement of the cranium imparted by the moving train will thus favour in a marked manner retardation of the forward flow of venous blood through the lateral sinuses, with the effect of inducing intra-cranial pressure and consequent nausea.—I am, Sir, Your obedient servant,

C. R. ILLINGWORTH, M.D.

August 21st, 1888.

GREENE PASHA RE DR. GRANT BEY'S "NOTES FROM EGYPT."

To the Editor of "*The Provincial Medical Journal*."

DEAR SIR,—I lay no claim to infallibility, and am therefore not astonished to find myself occasionally in error; but I resent being accused of *inaccuracy*, however mildly that accusation may be made, when my accuser thereby misleads the public. I here reiterate that the Arabic medical journal, *Al Shifa*, has been rewarded by the Government authorities for the medical *renaissance* it has produced by withdrawing the subscriptions from it, and by lavishing them on the *Shifa's* child (*Al Saha*). As you will observe, I made no special reference to the Sanitary Department, but as the cap fits, Greene Pasha has put it on, and no doubt it becomes him well, as you will see by the accompanying document, which gives a concise history of the *Shifa*, and its stormy connection with the Sanitary Department. The above quotation is based upon this history, for the accuracy of which I am responsible.—I am, yours truly,

J. A. S. GRANT BEY.

Bibliographical Record.

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AMERICAN:—

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3. Medical Register (Philadelphia).
4. New York Medical Journal.
5. Medical Record (New York).
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7. New England Medical Monthly.
8. Medical Times (Philadelphia).
9. The Polyclinic (Philadelphia).
10. The Analectic.
11. The Medical Standard (Chicago).
12. The St. Louis Medical and Surgical Journal.
13. The Denver Medical Journal.
14. Annals of Gynecology (Boston).
15. The Medical News.
16. The American Lancet.
17. The Medical and Surgical Reporter.
18. The American Druggist.
19. The Western Medical and Surgical Reporter.
20. The South Western Medical Gazette (Louisville).

BRITISH:—

21. The Philanthropist.
22. The Practitioner.
23. The Medical Chronicle.
24. The Medical Press and Circular.
25. The Journal of Microscopy and Natural Science.
26. The Indian Medical Gazette.
27. The Australasian Medical Gazette.
28. The Hospital Gazette.
29. The Journal of Rhinology.
30. The Birmingham Medical Review.
31. The Ophthalmic Review.
32. The Pharmaceutical Journal.
33. Public Opinion.
34. Health.
35. The Chemist and Druggist.
36. The British and Colonial Druggist.
37. The Australasian Journal of Pharmacy.
38. The Nursing Record.
39. Diet and Hygiene.

FRENCH:—

40. Journal de Medecine de Paris.
41. L'Union Medicale.
42. Le Progrès Medical.
43. Bulletin Général de Thérapeutique.
44. Gazette de Gynecologie.
45. Gazette Hebdomadaire des Sciences Medicales.
46. Journal de L'Ouest.
47. Journal du Nord.
48. Revue Pratique d'Obstetrique et d'Hygiene de l'Enfance.
49. Annales de Gynécologie et d'Obstetrique.

GERMAN:—

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51. Centralblatt für Gynecologie.
52. Centralblatt für Chirurgie.
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55. Fortschritt der Medecin.
56. Chemiker Zeitung.

ITALIAN:—

57. Lo Sperimentale.
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Our Portrait Gallery.

J. BURNEY YEO, M.D.

OUR English health resorts have during the last few years shown signs, as it were, of *renaissance*. Spas and watering places that had passed out of repute through the vagaries of fashion have again come into notice. We have such a wealth of life-giving waters and sea-side resorts that we could almost dispense, with a few exceptions, with foreign ones. The *Provincial Medical Journal* during the past seven years has endeavoured to keep our English sanatoria before the profession, and we believe with good results. We have endeavoured to stimulate native enterprise in this direction. We must confess that they manage foreign spas and baths better than we do. Managers at home, if they desire to compete, must take a lesson from Carlsbad, Spa, Weisbaden, etc. At some recent re-openings of English baths, Dr. Burney Yeo has given some excellent advice on the *desiderata* in connection with our English health resorts. As he speaks with a wide experience, his words will, we trust, have a good effect in stirring up municipalities and corporate bodies, who have mineral waters and springs within their boundaries, to render their towns attractive, to complete their bathing arrangements, to provide rooms for assemblies, etc.—in other words, to take a copy out of the book of foreign competition.

We may point out a few of the places where progress has been made. Southport, once a large sandhill, is now a charming summer and winter health resort; Bournemouth has turned its pine forests to good account; while Droitwich, Woodhall Spa, Ashby-de-la-Zouch, Harrogate, Buxton, Bath, have availed themselves of their natural mineral springs, and stirred into activity to popularize them. Our marine resorts are almost endless in number, and owing to the size of the country, they can be easily reached; and as they present every variety of climate—dry, moist, etc., there is an excellent choice in each individual case. We

need not send patients abroad for high altitudes. Practitioners would do well to remember our English spas and marine resorts before ordering their patients out of Great Britain. Fashion has a great deal to do with health and with medicine. We are not always able to control the populace, but we can to some extent guide and direct, so that fashion may run in the channels we would like it to run in. Physicians in large London practices may materially assist the crusade in favour of home health resorts.

Dr. Burney Yeo, according to *Men of the Time*, is descended from an ancient Cornwall family, dating from the reign of Edward III. He was born at Stonehouse, Devonshire, and educated privately until 1858. He then became a student in King's College, London, where he rapidly distinguished himself, and obtained three scholarships in succession, and other distinctions. In 1866 he was appointed Resident Medical Tutor in King's College; this post he resigned in 1871, and began practice in Mayfair, having been about this time elected one of the Physicians to the Brompton as well as to the King's College Hospitals. He was elected Fellow of the Royal College of Physicians (1876); Hon. Fellow and Professor of Clinical Therapeutics in King's College, London (1885); Physician to King's College Hospital.

Dr. Yeo has contributed abundantly to medical literature, and has furnished numerous lectures, commentaries, etc., to the *Lancet*, *British Medical Journal*, etc. He is the translator of Oertel's "Respiratory Therapeutics" in Zeimssen's "Handbook of General Therapeutics," and of articles in Zeimssen's "Cyclopædia of Practical Medicine." He has written largely on the treatment of disease. He is the author of a work on "Consumption" (1882), and of a manual on "Climate and Health Resorts" (new edition, 1885), which has been highly praised. He has also contributed several articles to the *Fortnightly* and *Contemporary Reviews*, and to the *Nineteenth Century*.

Original Communications.

AUTO-INTOXICATION IN DISEASE.¹

By A. M. BROWN, M.D.

THE new departure in pathology which the *Memoires* of MM. Peter and Gautier has inaugurated, finds an able exponent in Professor Bouchard. This eminent teacher, by the publication of his course of lectures, must now be regarded as heading the movement. Medical investigation, if it has not undergone complete transformation, has, it must be frankly admitted, entirely changed its objective; having been successively directed to the study of symptoms, anatomic lesions, and pathological physiology, it has now as its chief aim pathogeny. If this new direction of research has its speculative dangers, it promises a brilliant future in positive results. As I have elsewhere shown, it conducts analysis of morbid phenomena, with a view to ascertain how far they may be productive of or dependent on the action of material obnoxious to nutrition and nervous reaction, and to demonstrate that, whether introduced into the system from without or resulting from perversion of metabolism, secretion, and elimination from within, these poisonous principles explain the origin and mechanism of much of what is called disorders and disease. As the reality of auto-intoxication and auto-infection of the organism abounds in novelty and interest, and is every day receiving more and more the attention of the practical pathologist, a notice of the subject in relation to the lessons of Professor Bouchard may be welcome to the studious practitioner, who may have little opportunity of sifting his well-stored page for himself. The pathological field which the survey covers is sufficiently comprehensive. Recognising disease as arising from four leading processes, Bouchard commences by observing that man constitutionally and naturally possesses in himself much that is both potentially and actually morbid. His vital condition may be abnormal—in other words, nutrition may be defective; its vitiations or derangements being either hereditary or acquired, we have maladies of antecedent nutritive disturbance. The organism may be morbidly affected by external causes, physical, mechanical, or chemical, as by wounds, burns, poisons—causes which, by operating directly on the cells, excite immediate reactions. These pathogenic processes, we know, rarely remain simple; they are rendered complex by reason of mere reflexes. External causes may also act on the economy indirectly through the medium of the nervous system, and it is by that pathogenic process that maladies which Bouchard calls maladies of nervous reaction, are developed. Finally, the economy may be invaded by contagious or infectious elements, however these may be essentially regarded.

It may not always be an easy matter to distinguish the *ens mali* from the *agens mali* in disease. Bouchard, though subscribing to the theoretical import of a microbic rôle in etiology, unquestionably shows that as yet its range is very limited, and leaves things pretty much as they were. In the vast variety of ailments man is heir to, some, we know, are contagious or infectious, or are liable to assume that character. His method of investigation, however, clearly discloses the fact that whatever the essential nature

of contaminating elements may be, the more their operation on the organism is observed, the more evident it becomes that the vito-chemical processes involved, and their modes of manifestation are in no wise exceptional. Organic reaction is the law of disease, whether its processes are destructive or conservative in their issues. It is always with the nutritive and sensible nervous reactions that pathological inquiry properly commences.

Intoxication when acting primarily, that is, directly, Bouchard includes in the four pathogenic processes, but he upholds conclusively the view that the process of disordered nutrition, as well as those of nervous reaction and contagion or infection, may also cause intoxication; if in a secondary mode, that is, indirectly, and instances gout in those of flabby habit, accompanied with listlessness, depression, indisposition to exertion, and the like. In the renal, cutaneous and pulmonary secretions of such are detected incompletely oxidized products of disassimilations, such as oxalates, volatile fatty acid, etc. Substances, which it may be reasonably assumed in some way set up the nervous symptoms, and thus supply a tracing sufficiently indicative of intoxication due to antecedent nutritive disorder. Again, the same deleterious substances by excessive accumulation or imperfect destruction, in subjects ordinarily healthy, in consequence of loss of sleep, mental anxiety, bodily fatigue on defective hygiene, may induce the same result, and quite as clearly outlined. Again, in the case of the more pernicious maladies, whether arising infectiously or not, among substances elaborated, some are powerfully toxic even in small quantity, and are analogous to those the product of the putrefactive processes, and may become pathogenic agents of systemic poisonings. Bouchard cites in illustration septicemia. If in such case, says he, the malady is accompanied with no important organic lesions, if lesion is confined to the cellular tissues of the region affected, such as he believes is generally the case in septicemia, we naturally attribute the general accident to the absorption of toxic materials, alkaloidal or otherwise, elaborated in the course of morbid action. We can hardly understand their having any other origin. To all appearance, then, there are certain classes of disease in which infection leads to secondary intoxication. But, even in normal physiological conditions, and in the best of health, the animal organism is a laboratory and receptacle of what is poisonous. It receives them in disassimilation and secretion. The animal economy is thus the theatre of toxic evolution and elimination—phenomena which are even brought about by putrefactive processes, and which are always normally present in the faecal contents of the intestines. Faecal putrid products defectively eliminated in the course of health, as in disease may be absorbed and induce intoxication. It is in this way Bouchard accounts for many accidents which accompany dyspepsia and intestinal inaction.

Seeing the importance of the part played by disordered nutrition, nervous reaction, and putrefactive infectious processes continually at work in the economy, we are brought face to face with the luminous conceptions with which Armand Gautier more particularly has enriched modern medical science. We are confronted with physico- and bio-chemical processes of animal organic growth and decay, their chemical products, particularly those now known as the Ptomaines and Leucomaines, and finally with the grand facts that in life as in death, apart from and irrespective of bio-chemical interjectional activities, the so-called aerobic and anaerobic processes co-exist; that in

¹ Leçons sur les Auto-intoxicants dans les Maladies. Par Ch. Bouchard, Professor à la Faculté de Médecine.



My truly yours
J. Burnie Geo

the higher animals, man included, cellular life, to a very notable extent, is independent of inspired oxygen; that the anatomical elements undergo their transformations and other phenomena of oxidation, but that it is in the organised substance they find it. This is evident from the fact that if we note the amount of oxygen derived from respiration, food and liquids on the one hand, and that returned in carbonic acid by the lungs, skin, and intestinal excreta on the other, they are found equal. But what of the difference in excess of oxygen by water and carbonic acid? It is obviously derived from the reserve in tissue and cellular elementary combinations. Thus, it is now estimated that at least one-fifth of the vital processes is maintained by oxygen, which is not directly derivable from without, but from within; that the processes of metabolism and disassimilation are in a notable part carried on by processes analogous, if not identical, to those of putrefaction or fermentation. In the removal excreta and ingesta are to be found the products of the putrefactive processes properly so-called. The comparative study of these processes in the physiology of health, as in disease, is consequently necessary from the pathological point of view. The constituent material of organic substances, that is, the cellular elements having served their purpose, break up, their effete noxious material products are set free. Passing into the extra cellular liquids the resulting products of disintegrative activities are taken up by the lymphatics and thrown into the blood, in whose circulating current all effete transformed material—that found in the intestines, in part at least, included—find its way. Elimination being completed in the process of emunction where the skin, lungs, kidneys, and bowels, perform their respective rôles.

Thus, all poisons come through the blood. As we have seen, the blood necessarily disposes of its poisonous accessories through the various organs of elimination, so consumes them in the circulatory current in contact with the red globules. This being the case, can the blood be regarded as otherwise than toxic? Constantly traversed by noxious impurities it must necessarily and invariably contain toxic elements. Bouchard has shown that it is really toxic, and has succeeded in very closely defining the limits within which it is so; and this has enabled him to conclude that man would die from poisoning if the blood contained ten times more toxic material than it normally contains. But it is to the plasma that this applies. Its cells, like all other cells of the organism, contain elements potentially deleterious. The constituents, however, can only be set free by disassimilation or destruction of the cells themselves. Some are remarkably toxic and form two orders: the organic, largely alkaloidal; the other inorganic, mineral matter.

In co-operative elimination and emunction then, lies the safeguard of the economy. This physiological conception admitted, its experimental verification has to be considered, and in the kidneys and their functions to begin with. The urine gives the key to the problems of intoxication, and forms the necessary introduction to the subject as a whole. This secretion has always been held as toxic, but of experimental proof of it there was little until Feltz's and Ritter's study of the point. But even their work left much to do, at least in detail. It remained for Bouchard to accomplish it. He found the urine toxic, and set himself to a systematic course of venous injection, conducted on the lower animal; he ascertained the intensity and variation of toxicity in a given weight of animal substance furnished in a given time, and in this way arrived at the comparative

unity of urinary toxicity present. Proceeding on these lines he has been enabled to give numerical expression to these, and in doing so has endowed pathology with yet another term—*urotoxy*; that is, the standard of toxicity of urine necessary to kill a kilogramme of living substance. It is very singular to read these values in terms of living animal matter that may be killed by given quantities of urine under examination; but it is not an easy matter to detect a fallacy in the procedure, one which promises a ready method of estimating specific actions of multiple poisonous constituents. By examining the normal urine passed in twenty-four hours he forms his urotoxic standard, and studies carefully the variations of toxicity in physiological conditions, and in various pathological states. In this way he establishes the fact that urine per kilogramme fabricates in twenty-four hours sufficient toxic matter to kill 464 grammes of living substance, or nearly the half of what would kill himself in forty-eight hours, all things equal. Variations are significant, and are dependent, in normal urine, on vital conditions, muscular and cerebral activity, alimentation, sleep, etc., etc. Whilst dealing with familiar phases of investigation, Bouchard presents us with others which are altogether new and startling. He finds for example, that night-urine is denser and richer in solid material, and always less toxic than day-urine; that during the hours of sleep man eliminates from two to four times less poisonous material than he does during an equal time of wakefulness or cerebral activity; further, that the toxicity of night and day urine not only differs in quantity and quality, they are also antagonistic in their action, and neutralise each other. The urines of the sleeping hours are always distinctly convulsivant—stimulant—while those of the working hours are sporic—narcotic—the organism by this mechanism thus eliminating during wakefulness material, which, if accumulated in the system would induce sleep, and during the hours of sleep eliminating that which would induce wakefulness, thus opening up fresh lines of physiological speculation and research of the most vital and interesting kind.

But the degree of toxicity of the urine is only one stage of the investigations Bouchard aims at establishing. He carries his inquiries much farther, and dissects them, then, as it were, examining each of the toxic elements in their chemical, physiological, and pathological relations. By varying his experimental procedure, he has shown that urine contains not one poison but several. In treating urines with alcohol and other solvents in order to separate their materials, with charcoal he has succeeded in disassociating three various toxic elements, and ascertains the fact that there exist at least seven, which may be classed thus: one is a diuretic, a second is a narcotic, and a third sialogenic. There are two other products, one organic, the other inorganic, which are convulsivant; this mineral he finds is potash. Then comes a body which induces powerful myosis—contraction of the pupil—and which is also met with in colouring matters. Lastly there is an agent which reduces temperatures. Analysis of these chemical constituents in their physiological effects are as yet very imperfectly obtained. With few exceptions it has not been possible to isolate them in sufficient quantity for this purpose.

The elimination of such substances rendering the urine toxic, explains why the system escapes their deleterious action. The method and mechanism of their formation now claims a closer examination, especially the co-operative rôle of the liver and intestines. The bile which periodi-

cally flows into the alimentary canal contains poisonous elements, particularly in the colouring matters; much less so are the biliary salts. Normally, however, secreted bile is little dangerous to the economy, and this by reason of the colouring matter and the salts in a great measure finding their way in the bowels. The intestinal ingesta undergoing putrefaction gives rise to the formation of toxic substances, but in the slow and intermittent passage of the fæces, a part, at least, of the toxic elements is liable to absorption through the mucous surfaces, and finds its way into the *vena porta* where it is arrested, when what is not rejected again into intestines passes into the general circulation.

The alimentary canal is in this way a cause of poisoning to the system, and the question of intoxication from this source has consequently received much attention from observers such as Gautier, Brieger, Angelo, Mosso. But it is to Bouchard we are chiefly indebted for our information. He has taken up the subject, extending it in its physiological and pathological applications more particularly. He has investigated the subject, and shown that alkaloids exist in the fæcal materials; these alkaloids are of several kinds, and that when markedly present in the intestines they are found to be markedly present in the urine also. After Stick he has confirmed the fact of the toxicity of the fæcal matters. He has examined the toxicity and shown that it is due in great part to potash and ammonia. But that even when relieved of these elements they still retain a certain degree of toxicity which must not be disregarded. He shows that intestinal anteseptics, which disposes of the alkaloids of the fæcal and urinary matters at the same time, diminishes the toxicity of both. Thus, knowing the urinary poisons and their various sources, he has been enabled to study that form of intoxication which is due to their retention, and known as uræmia. Whilst carefully keeping clear of the urotoxic accidents liable to intrude themselves and complicate matters in disease of the kidneys, such as albuminuria, arterial œdemas, including, for example, that of the brain. By this means he has obtained decided proofs of the fact of the reality of toxic uræmia, while showing that the urine is not toxic. He shows that the uræmic urines are not toxic for the reason that all the toxic substances which the urine normally eliminates are found to be retained in the organisms of those affected. To the question: "Is all that is retained toxic, or is only a portion of it, and if so, which portion?" he finds it is neither the urea nor the potash exclusively. Neither of these of itself explains the intoxication. Each of them contributes in part, though differently, to that condition as a whole. The colouring matters $\frac{3}{10}$ ths, the extractive matter $\frac{10}{10}$ ths, potass and mineral matters $\frac{4}{10}$ ths. A knowledge of the multiplicity of the toxic agents enables us to understand, according as one or other of these eliminates, the various clinical forms uremic poisonings may assume, the convulsive or comatose in particular. The presence of certain special symptoms, such as hypothermia, contraction of the pupil, and pathological intoxications, which he endeavours to show not only satisfy scientific curiosity, but are suggestive of practical application therapeutically valuable.

Next he proceeds to examine the morbid conditions which are caused by gastric embarrassments, of which excessive accumulations, constipation, and intestinal obstructions are examples. He traces the history of a variety of intoxications of intestinal origin, citing that of Senator, in which the offending element was sulphohydric acid; poisoning from fish, which he personally observed,

and in which the presence of an excess of alkaloidal substances to which the same might be charged was present, and refers to the instance of over-kept stuffed goose, in which Brouardel and Boutmy succeeded in isolating toxic alkaloids, showing that all these cases had actually passed through infection to intoxication. There was detected between the ingestion of the putrid ailments and the setting in of toxic symptoms a period of incubation. It appeared to him that the poison, elaborated by microbic action of the goose meat, was too small in quantity to induce poisoning, but the microbic putrefaction acquiring a greater intensity in the intestinal canal became much increased, and then the toxic products were sufficiently abundant to produce intoxication. Here, again, incubation compels us to admit infection; but that the infectious agents manufacture a poison, and infection results in intoxication. Bouchard holds that the usual circumstances under which such accidents of toxicity take place, in consequence of the formation of poisonous elements in the digestive tube, is in the singular condition, he recognises as dilatation of the stomach, and which—apart from dyspeptic troubles as nervous derangements always acknowledged in the *corlège* of dyspeptic disorders—seems to him to be capable of setting up many other disorders, such as albuminuria, a condition usually chronic, and liable to become permanent, but amenable to treatment, and that successfully when the real cause has been discerned. It is by setting up anomalous gastric fermentations, which extending to the intestinal canal, give rise to the formation of poisons, particularly acetic acid, that dilatation of the stomach vitiates nutrition of various structural tissues, even of the bones and cartilages, and may not be a stranger to ostio-malacia, nodular rheumatism, perhaps including rickets. Of other maladies dependent on matured intoxications caused by dilatation of the stomach, which he thinks the most manifest are chlorosis and pulmonary phthisis.

This may take some by surprise. It is, however, dealt with in a most exhaustive manner by the learned experimentalist, who, if he does not convince, at least, makes it very probable that dyspeptic and gastric affections must henceforth be given a wider range in pathological research. It may be difficult to accept the lengthened list of maladies dilatation of the stomach is parented with. Still it must be owned that it is precisely with respect to this question of etiology that we are most ignorant, and any rational examinations of it based on demonstrated fact ought not to be lightly estimated, thus indicating the rôle which secondary or indirect poisoning plays, even in infectious maladies. Bouchard proceeds to lay down his views regarding the treatment of typhoid fever in which he sees chiefly indicated intestinal antiseptics, and general balnear anti-thermics, and a particular line of dietary, thus laying down, *apropos* of enteric fever, general rules which might be found applicable to other acute maladies.

He next goes on to show the part intoxication holds in jaundice, pointing out that here intoxication is twofold. The bile, contrary to what has been hitherto supposed is toxic, particularly in its colouring matter and that what protects the organism from the action of this element is the urine, which eliminates incessantly one part of it; there is also the cellular tissue, the white fibres of the fibrous tissues of which, fixes or takes up colouring matter not eliminated, and which, should it remain in the circulation, would seriously affect the functional play of

the nerve cells. As for the other part, the biliary salts, they go to augment disassimilation, to destroy the muscular cells and blood globules, thus liberating the poisons, organic and mineral, particularly potash.

In maladies that give rise to jaundice, the liver, which is normally charged with the protection of the organism from intestinal poisoning, is deranged or obstructed in its functional action. It ceases to fulfil its part; it ceases to manufacture urea; the diuretic *par excellence*. It is it, which by forcing the renal barriers conveys with it the other toxic materials. Thus takes place a complex process of intoxication, whose successive phases are cholæmia, acholia, and uræmia. There consequently can be little question but that the safeguard of the organism from intoxication is chiefly the kidneys. So long as they are functionally active, the urines of jaundiced subjects are very toxic, not from the bile which they contain, but from the material resulting from unusual increased disassimilation. When the kidneys cease to discharge their function of depuration, the urine of the jaundiced patient ceases to be toxic, still the patient is poisoned from the simple fact of retention of the normal poisons in the system.

But the normal poisons are not alone in question in all intoxications. Bouchard points out in the acute atrophy of the liver the presence of a singular substance produced by the organism, and which elaborates vitiated material, and points out unusual albumen, unusual transformation of medical agents, such as naphthalin, which ceases, in the case of hyptic atrophy, to be eliminated in the state of naphthy-salphite of soda; some of these are toxic. Again, we are reminded that in glycosuric patients, besides accidents resulting from the complete destruction of sugar formed by the organism, this body may give rise to substances which, in the urines of subjects suffering from diabetic coma, take a wine red colour in contact with perchlorate of iron. These substances, however, are not alone met with in the diabetic, for they have been detected in the cases of dyspeptic coma, in certain cases of cancer of the stomach, and permanent anæmia, leuco-cythæmia, and more recently Bouchard has met with them in typhoid fever. These substances, as experimentally proved, are toxic. Contrary for the most part to the auto-intoxications hitherto exposed, that called acetonæmia is an intoxication by an anomalous poison, a morbid poison.

In cholera, also, there is sometimes the formation of anomalous material; this is detected by the violet colour given by the urines of cholera patients, even on emission, while under naphthalin medication. But cholera is an example of multiple intoxication, and Bouchard has shown that in choleraics there is present a special poison, practically unknown, elaborated by the organisms, and some of which are obviously alkaloidal. This substance appeared to Bouchard to be clearly evidenced from specific toxicity of the urines of choleraic subjects when injected into the veins of rabbits; they determined definite symptoms characteristic of cholera, though not the malady itself. He has also pointed out that, besides the accidents choleraic intoxication exhibits, those attacked, consequent on anuræa—suppression of urine—are subject to secondary intoxication. This is from the retention of the normal poisons, and myosis—pupular contraction is present as the clinical criterion of uremic intoxication having taken place.

Bouchard's admirable course on auto-intoxication closes with therapeutical applications deduced from the pathological conception the study imposes. The treatment of auto-intoxication draws largely on the antiseptic method;

and we naturally wish to know what may legitimately be expected of antiseptics in general. We know that the mastery of the mechanism of maladies does not bear with it the mastery of the remedy, but from the lucid exposition on this head, good results, if limited, may be reasonably looked for from this source.

A SKETCH OF AN HYPOTHESIS TOWARDS VITO-CHEMICAL METHODS IN PATHOLOGY AND THERAPEUTICS.

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(Continued from page 403.)

"MAN, being the servant and interpreter of nature, can do and understand so much, and so much only, as he has observed in fact, or in thought, of the course of nature; beyond this he neither knows anything nor can do anything." ". . . Another error is an impatience of doubt, and haste to assertion. . . . If a man will begin with certainties he shall end in doubts; but if he will be content to begin with doubts he shall end in certainties" ("Ad. of Learning."—Bacon).

It does appear, from the history of the order of the evolution of our knowledge, that the human mind is capable of general ideas in biology only after it has assimilated parallel ideas in higher mechanics, astronomy, and in physics. We thus see that the idea of evolution in biology was of late acceptance. It was a much simpler thing to invent euclid and the laws of astronomy than to read the laws of chemistry and physics; and, *à fortiori*, the laws or forms of organic evolution are infinitely more complex. That this is true will be obvious if we ask, Whose mind has risen to such a generalization as to be able to state the ratios and conditions of the evolution or development of a cell? And yet it *must* be true that cells, and the whole organic realm, are as orderly and as acting by law as are the most simple mechanical motions, and that the organic is in absolute continuity with all other existences. But this slow evolution of our knowledge on the laws of the organic, when in its normal states, or health, must be even less difficult than it is for us to interpret the laws of the organic when they are disturbed—*i.e.*, in disease; but we are sure that an absolute continuity obtains between the motions and energies which make for health, and their deviations, which make for disease.

Holding, then, as an *à priori* truth, that law and order must obtain in the organic, and further, holding that such law or forms must be in continuity with other modes of matter, and energy, and motion, is it not legitimate for us to seek to interpret such laws or order? The secret of these laws must lie in the molecular energies of matter, and in their motions. How else can we correlate the different results on protoplasm of

Morphine	$C_{17} H_{19} N O_3$
Quinine	$C_{20} H_{24} N_2 O_2$
Strychnine	$C_{21} H_{22} N_2 O_2$

It is obvious that the different powers on protoplasm of these different bodies reveal to us an as-yet unread, uninterpreted form of molecular motion, and that such motion or energy is nearly related to, and in continuity with, that energy which becomes life. The phenomena following the contact of these bodies with protoplasm imply not only the special molecular conditions of the bodies themselves, but further, they imply a mode of the protoplasm of the body, vito-chemically fit for their influence, in a state of unstable equilibrium, in relation to them. Nay, further, this state of

receptive or unstable protoplasm may fairly be hypotheticated as that out of which "poisons" autogenically evolve. There can be no *absolute* autogenesis. Granting, for the sake of illustration, that "poisons" evolve in the system, we say that they have evolved "autogenically;" but in reality such a deviation of the protoplasm of the body has correlations with the cosmic energies and existences which go to create and sustain the individual. Still it is no less true, *e.g.*, that cases of fatal cholera have evolved after a Seidlitz, or change of place, or shift of wind, or fall of rain, etc., etc. It is true, also, that yellow fever has evolved after an emotion, or after passing the catheter. Also "typhoid" has evolved in new comers, in different countries, from the *changed* environment. These *vegeto-alkaloids* act chemically, like to ammonias, and form salts—*e.g.*, muriate of morphine. "The constitution of the radicals contained in these various bases has not hitherto been made clear. Among the cinchona alkaloids . . . some interesting cases of physical isomerism occur." . . . "A base isomeric with conine has been prepared artificially by heating normal butylaldehyde with an alcoholic solution of ammonia so as to produce dibutyraldine, . . . and then submitting this latter substance to dry distillation. . . ." The natural alkaloids . . . at present known are tertiary compounds. The following are some of the more important of this group of amines :

From Opium :

Morphine	$C_{17} H_{19} N O_3$	Papaverine	$C_{20} H_{21} N O_4$
Codeine	$C_{18} H_{21} N O_3$	Meconidine	$C_{21} H_{23} N O_4$
Narcotine	$C_{22} H_{23} N O_7$	Cryptopine	$C_{21} H_{23} N O_5$

From Species of Cinchonas :

Quinine	$C_{20} H_{24} N_2 O_8$	Quinamine	$C_{20} H_{26} N_2 O_2$
Cinchonine	$C_{20} H_{24} N_2 O$	Paytine	$C_{21} H_{24} N_2 O$

From various other plants :

Strychnine	$C_{21} H_{22} N_2 O_2$	Atropine	$C_{17} H_{23} N O_3$
Brucine	$C_{22} H_{26} N_2 O_4$	Caffeine & Theine	$C_8 H_{10} N_4 O_2$
Nicotine	$C_{10} H_{14} N_2$		

(*"Enc. Britt.,"* vol. v., p. 576).

In view of such a table, and seeing the nearly allied atomic composition of all the bodies, and remembering the vastly different powers of these bodies on protoplasm, what else can we seek but some great all-pervading form of molecular arrangement and motion, which, in its differences, determines the therapeutic power of these bodies? Nor, as before remarked, must we forget that protoplasm itself, in its modes of receptivity for molecular changes, runs parallel with these bodies; and which parallelism is seen both in the therapeutic capacity for the induced action of the alkaloids themselves, and in the autogeny or occurrence of diseases whose symptoms are like to those produced by the alkaloids. We may remark, then, of these *vegeto-alkaloids* :

(a) The nearness of their chemical atomic constitution to each other, and yet their vast difference of therapeutic action.

(b) The nearness of their atomic constitution to that of albumen, omitting the S of the latter substance, albumen being $C_{24} H_{38} N_6 O_8$ (*"Enc. Britt.,"* vol. v., p. 456).

(c) Their searching influence on protoplasm—*i.e.*, their rapid and intimate power of disturbance of the correlations of the normal molecular motions of protoplasm. Like to the action of yeast at certain temperatures—*i.e.*, yeast having a certain molecular motion—they set up in the protoplasm a new and disturbing molecular motion.

(d) The action of these alkaloids in the system results often in symptoms like to those of normal functions, and often like to other groups of what we term "diseased function," but which latter we know to be in continuity with

normal function—*e.g.*, we see opothotenos in hysteria, after simple wounds, after wounds associated with certain salivary secretions, and after the administration of strychnine.

In such, and other instances, taken from the whole field of the resemblance of symptoms to therapeutic actions, we are sure that the vast number, and variety, and delicately-graduated symptoms, or phenomena, must be capable of being approximately grouped under general laws.

"Thus the whole of the throng points to deep-hidden law,
Points at a sacred riddle. O! could I to thee, my beloved friend,
Whisper the fortunate word by which the riddle is read."—*Goethe*.

Albuminoid Bodies.—In the view I have taken of the continuity and correlations of the alcohol-radicals, it is seen that there exist a vast variety of bodies of isomeric, or nearly isomeric composition, but which have very different properties, in their chemical, physical, and therapeutic actions. If we have seen an almost infinite number and variety of these alcohol-radical derivatives, we have no less seen the great form of continuity between them all, and this continuity reaches and extends over a vast field of the bodies of the organic kingdom. We have seen it extend from the primary molecular splitting up of starch, by contact with other cell activities and motions, to the embracing of the complex organo-metallic bodies, to the highly atomic condensed bodies—the aromatics, and to the yet more therapeutically powerful group—the *vegeto-alkaloids*. In these latter, especially, we recognise the presence of N, and it is suggestive that in these bodies, which have so strong a correlation, so near a mode of disturbing assimilability in their molecular motions, to the protoplasm of the body—and which we express by the words, "powerful poisons"—should, by the presence of N, approach chemically and molecularly to the constitution of protoplasm itself.

If we call to mind the illustration I gave of the amazing delicate and complex vito-physical correlations in which an animal exists, and with which protoplasm correlates, and to which its exquisite equipoise responds, as seen in the instance of *Bombyx*, or as seen in the sudden evolution of an outbreak of cholera within a few hours of a sudden colder wind and downpour of rain, we shall perceive the near parallelism to those phenomena which follow the administration of "poisons." In all the instances the molecular modes of protoplasm respond, either to heightened function or to interrupted function. We hold as a necessary truth that the processes in all the cases are orderly, and in continuity with normal rates. Their recognition is obviously beyond our senses or our instruments. Our hope for their just interpretation lies in the method of analogy and deduction. After Lyell showed the law of continuity in geology, by the great truth of "the sufficiency of existing causes," for the explanation of geological phenomena, the great forms of "sufficiency" and "uniformity" have become deductive truths in other sciences—languages, mythologies, correlation of the physical energies, etc. So it is in true method now to seek to apply deductively the forms or laws of the action of "poisons" to the autogeny of diseases; and, further, deductive analogy seems our main hope of method in seeing the form of the molecular motion which will explain *how* the modes of protoplasm, Albumen $C_{72} H_{112} N_{18} O_{22} S$ (Leiberkuhn), are fatally changed after the application of Strychnine $C_{21} H_{22} N_2 O_2$; or after the *change* of environment, which the rain and cold induced. In this age we feel to the fullest all that is implied by the words and hypotheses, "cosmic evolution" and "continuity," and that the respond-

ings and functions of cell-contents, both in health and disease, are absolute "survivals"—absolute and essential correlations, with and of cosmic environment; but we are equally sure that the laws and forms of their mode of action are open to interpretation if true method be adopted. When the cobra in the hot season bites the native, or when the native is found in cholera, on the morning after having slept in his verandah, there having been a change to a colder wind and rain during the night, there is opened but *one* grander question of the evolution of changed inharmonious molecular motion and new correlations within the protoplasm. We seem to have accumulated examples until their number and mass overwhelm us. Is it not time to seek to apply some deductive form or law to these and allied phenomena? If we were studying the origin of electric energy, as it exists in an animal, we should apply the generalisation of Faraday on the electric current, "as an axis of power, having contrary forces exactly equal in amount in contrary directions." . . . "An electrolyte cannot conduct without being decomposed." "The force which determines the decomposition of a body is *in* the body, not in the poles." This "electric current," or energy, or mode of matter and motion, is *pan-diffused* in the ultimate molecules of organic plasma. It is one of the correlated activities consequent and inseparable from the essential vito-chemical processes of living protoplasm. Again, we follow Darwin, that the future individual, with all his tendencies, is latent in the ultimate 'gemmules' of the bud! Here, then, we see that Faraday's widest generalisation of vito-chemical energy is near and parallel to Darwin's widest generalisation of biological method. Disease must have parallel bases to these wide facts. And, further, such a substance as strychnine must in its mode of action have a facile aptitude to change the dynamic polarities or modes of the ultimate molecules or atoms, and which are part of the then-existing survivals or conditions of life.

Our present chemical knowledge does not compass the form of albumen. "So long as the constitution of the immediate principles of animal tissues has not been determined, it will be in vain for physiological chemistry to investigate by the most careful direct analysis the different elements of an organ, or of a liquid, whether in a normal or in a pathological condition. We shall always be stopped by the unknown in the interpretation of the results which have been obtained" ("Fermentation," by Schutzenberger, fourth edition, p. 254, 1886). "The many and various reactions which take place in the organism may be regarded as true fermentations, in which the fermentable bodies are partly represented by proteids." . . . "Thus albumen, which was long considered an immediate principle, is, in fact, only compounded of many albumens, having *very nearly* the same composition." . . . "In fact, these bodies have certainly a very high molecular weight. . . . We are led to very high numbers in the expression, as in that proposed by Leiberkuhn— $C_{72}H_{112}N_{18}SO_{22}$." . . . "Elementary analysis, as we are at present capable of performing it, cannot solve the question of isomerism or non-isomerism." . . . "I have lately been led to study, with great care, and in all its details, a reaction which allows the albuminoids to be almost entirely resolved into crystallisable principles" (Op. cit., pp. 255, 258, 259, 260).

Soluble Ferments.—Viewing large groups of the varied vital actions of cell-life and change within the body—such as the alcoholic, butyric, putrescent, varied albuminoid productions, varied "specific" poisons of many diseases, etc.—as conveniently expressed by the word "ferments," Schutzenberger says: "It is certain that a ferment is able to

live and develop in a saccharine, nitrogenous and mineralised medium, without the intervention of oxygen" (Op. cit., p. 270). Another great fact is that there exists in the process of alcoholic fermentation by hydration an "alterative ferment," "a soluble principle, to which we can attribute no organisation, but which is directly derived from a living organism (which) possesses the remarkable power of altering cane sugar in a few moments" (Op. cit., p. 271). A soluble ferment has been obtained from germinated barley, which has the power of turning starch into sugar. Similarly, amygdalin is transformed by emulsion into essence of bitter almonds. These are but instances of the wide form of the continuity of the molecular capacities and modes, amongst different bodies, of the organic kingdom—a great form in vital process, and which must be in infinite activity in the cell-life within the body both in health and disease.

Another fact is "The greatness of the effect compared with the trifling quantity of the active agent, . . . their great transforming power . . . over a great number of organic products" (Op. cit., pp. 272, 276, 282, 283). But this fact involves the great principle, that at recurrent times, and at such times only, in the main, the protoplasm of the system has a tendency to exist in a state of heightened unstable equilibrium—thus, *e.g.*, at certain seasons and times, *almost any change* of environment, or diet, or mode of life, or shock, or emotion, will be followed, in the new comer especially (whose protoplasm is not yet in correlated harmony to environment), by cholera in Bengal, and by yellow-fever in Demerara or Vera Cruz. Similarly, new comers pass into a fever—typhoid—in India, Egypt, South Africa, etc. I conceive that such facts not only illustrate the so-far autogeny or evolution of cholera, yellow-fever, typhoid, etc., but they further illustrate the great form of the great results which small amounts of change are capable of setting up in the system at recurrent periods. It is important and suggestive to remember, in relation to the splitting up of the proteids of the organism, and on the bearing of such splitting up on the autogeny of the "poisons" essential to disease, that "M. Pasteur has distinguished, among the complicated facts of putrid fermentation, two orders of distinct phenomena, although each is connected with the reactions set up by living organisms. The first includes the putrefaction which takes place without the assistance of oxygen in the air, which is caused by the presence of vibrios. . . . Butyric fermentation is connected with these phenomena." . . . "The second, slow combustion, is due to bacteria, mucors, and mucidines; that is to say to vegetable ferments, which . . . possess the remarkable property of exciting the oxidation of a great number of organic principles, such as sugars, alcohols, organic acids, albumenoid nitrogenous matter, etc., at the expense of the oxygen of the air" (Op. cit., pp. 241-2). Schutzenberger says "The existence of a certain number of albuminoid substances, considered as distinct species, has been admitted, being founded on more or less important differences in their physical and chemical properties, or in their elementary composition" (Op. cit., p. 254). "Among these groups (of albuminoid bodies) many closely allied species may be placed, which owe their existence and individuality only to certain subtle divergences of properties which present to the mind nothing very distinct, such as the manner of forming precipitates with different reagents" (Op. cit., p. 255). Barthelot (1872) "considered from the whole of the facts then known, albuminoid substances to be complex *amides*, formed by the union of amido-acids of the series $C^nH^{2n+1}NO^2$ (such as glycocoll and leucine), of tyro-

sine, with certain oxygenated principles, some of which belong to the acetic series, and others to the benzoic series" (Op. cit., p. 267). Under the heads of "Butyric Fermentation and Putrefaction," Schützenberger says (Op. cit. p. 219) "When in a putrescible liquid, containing albumenoid organic matter, the dissolved oxygen has been absorbed, and has completely disappeared, under the influence of the first infusoria developed, such as *Monas crepusculum*, and the *bacterium termo*, the *vibrio* ferments, which do not require this gas to sustain their life, begin to show themselves, and putrefaction is immediately set up. It is accelerated by degrees, following the progressive increase of the vibrios. As to the putridity, it becomes so intense that the examination of a single drop of the liquid under the microscope is a very painful task" (Pasteur).

If the chemical reactions, resulting from the splitting up of the albuminoid molecule by inorganic bodies—barium, etc.—are so complex as to be at present beyond our knowledge of the orderly laws of evolution, still more so are the products of such molecular splitting up of albuminoid molecules by other cell motions, as in putrefaction. We are certain, however, that the vast, nay, infinite number of the facts which biology presents in health and disease, and which so overwhelm us at present, must be orderly and in harmony with some great laws; and further, we are certain that such laws *must* be open to us, did we but look in a right method!

Under the influences of inorganic bodies (barium, etc.) on the albuminoid molecule we see reversions to more stable, and less vital, bodies—leucine, tyrosine, oxalic acid, grape sugar, etc.—appear. Under the influences of newly-applied and varied cell activities, such as those of pre-mortem cell molecular motions—e.g., those of scarlet fever, puerperal fever, plague, small pox, etc.—and of post-mortem "poisons," or cell activities, we see yet more active and deeper disturbances of the albuminoid bodies of protoplasm, and whose outward expression of symptoms are the great fever and febro-inflammatory diseases.

Diseases are thus presented to our minds, as orderly processes, and in a graduated series, correlating with the effect of cell-potentialities which are causing disruption of the albuminoids of protoplasm. We are sure that generic vitomolecular changes are common to the great fever and febro-inflammatory diseases, and that such varied changes and symptoms have common general chemical laws, and that the great form of continuity is the method of all the phenomena.

Hydration.—Schützenberger says that "it is very probable that the digestion of albuminous matters, and their conversion into peptones . . . are results of a hydration and a splitting up" (Op. cit., p. 279). And again referring to sugar, "This alteration, this splitting up of the succharose by hydration, is produced before any alcoholic fermentation takes place" (Op. cit., p. 290-1). Such examples give us a view of a very wide form in chemical method in organic bodies, and ranging from the sucroses to the albuminoids.

(To be continued.)

NATIONAL DISEASE PROBLEMS.¹

By CHARLES F. K. MURRAY, M.D., M.C.H., F.R.C.S.I.

YOU have accorded to me a very great privilege in that I have the honour of addressing you again in the capacity of president of this association. Last year, I felt very strongly that it would be more beneficial to the welfare of this society if you had elected another of our brethren to

¹An address delivered before the members of the South African Medical Association, at the Annual Meeting, held on June 28th, 1888.

hold office, for I believe that new blood is most desirable in those holding official positions in connection with all kinds of associations. The "Leaven of the New Blood," if it does not always work wholly for good, at least provokes criticism, and in the broad daylight of a healthy opposition new vitality is engendered, and two evils are often checked: firstly, the development of a species of intellectual pernicious anæmia; and secondly, that process of crystallization which may sometimes land a society into one dull routine. During the year that is past, as appears in our secretary's report, the meetings for the transaction of business have, from various causes, not been so numerous as in the preceding year, yet I venture to affirm that some work has been accomplished, which I trust may bear good fruit in the future, and prognosticate increased vitality for the years that are to come.

AFFILIATION TO BRITISH MEDICAL ASSOCIATION.

While alluding to this point I desire to refer to a matter which has lately been occupying our minds for some time past. I allude to the formation in Cape Town of a branch of the British Medical Association. We have recently had a meeting at which it was unanimously resolved to establish such a branch. There can be no doubt that it is desirable that we should allay ourselves as far as possible with the parent stem. The great majority of practitioners out here are all in one way or other associated with the older Universities and Colleges of the Mother Country, and it is a source of great pleasure and interest to us all to cherish the best "traditions" and practices of our profession as handed down to us, whilst we in return may, from a comparatively new country, give some contribution to science, either in the study of diseases incident to different climates or localities, or mayhap in the medicinal properties of plants indigenous to this country, or in use amongst the native races, find some remedy which, after study and careful investigation, might prove a useful adjunct to treatment. We can, by the formation of this branch, form as it were a standing welcome to all members of the parent society who may chance to be passing through, as well as to those of our brethren who are here now, and who belong to the naval and military medical services, so that on both practical and historical grounds I hail with pleasure the formation of a strong central society in Cape Town, which, on the broad basis of the British Medical Association, shall, in a sense, weld us into one whole, and keep touch with all our brethren. Indeed, I seem to see a vision in the far distance of one of the great annual gatherings being held in Cape Town; for it seems to me that South Africa is even now on the eve of a very rapid development, a development of such magnitude that, at present, one fails to grasp even the possibilities of the problems of the future.

POSSIBILITIES AND PROBLEMS.

Those words, "Possibilities and Problems," surely convey to some of us a deep, I might say an absorbing interest, even to some of us it may present a golden interest, but on that point I do not desire, nor is this a fitting time and place, to decant on such matters, but I do desire most earnestly to draw your minds as skilful and scientific men in one direction—namely, in asking, "What are the possibilities and problems in disease which await this community in a national sense, and what are the 'national' health dangers which lie ahead of this community at no very distant future?" In using the term community, I do not apply it to the Cape Peninsula especially, though no doubt that district will share alike with the rest; I apply

it to the whole of South Africa, for disease germs are subtle foes as far as they are known, and districts or nations cannot, as was the belief in what are still termed by some "the good old days," be kept intact from disease by a net drawn round a village, as I think history has handed down to us used to be done in Cornwall in those "good old times." Well to my mind *three* very great and very grave national disease possibilities or problems, if you will, are at this moment face to face with us as medical men: they are *Leprosy*, *Syphilis*, *Alcoholism*; perhaps I should reverse the order to say alcoholism, leprosy, and syphilis. But no matter in what order I present them to you, they are a highly interesting though somewhat gruesome trio. It may be that some of you say this is no new thing to us, and we all here, like the men of Athens of old, desire, and frequently are gathered together "either to hear or to tell some new thing;" nevertheless, my earnest desire is that as a body, the medical men in all parts of this colony may be united in their endeavours to stamp out these three dire scourges, and to strengthen the hands of our rulers to decided action, or, if need be, to awaken them from their present lethargy to a sense of their responsibilities to the nation as far as public health is concerned. I desire, therefore, to freshen our minds and to fix them for a time on these three great forms of disease in the light of national disease problems.

LEPROSY.

In the first place I will take leprosy. It has been found by experience that individuals rapidly become habituated to the contemplation of certain evils, which they meet with frequently in daily life, till at last such things are looked upon not only with equanimity, but as a matter of course and daily routine. The same observation applies to communities. For instance, history tells us how cities sprung up and grew and increased in power and wealth in dangerous localities, oblivious to all possible dangers, till at last ruin overtook them, as in the case of Herculaneum and Pompeii. Even now, at the present day, houses are found high up on the slopes of Vesuvius. If this mental condition can be developed as regards dangers easily seen, how much more likely is it to become developed with reference to dangers which cannot be easily grasped at first sight, but are only clearly seen when looked at through the medium of patient observation and study. Now somewhat of this nature I maintain is our present position as regards "leprosy." Viewed by the medical profession as an incurable disease, and with a divided opinion as to its powers of propagation through contagion, very little time and practical attention are given it. An uncertain light being thrown upon it by medical science, it is only natural that the public should feel but slightly concerned about it, and that concern only felt by the more educated of the upper classes, is not at all shared by the lower, who cheerfully harbour their diseased relatives, and, unless driven by necessity, will not allow them to be sent elsewhere for treatment. Impressed as I am with the danger threatening the public health from this source alone, and with the risk of contagion at certain stages of this disease and under certain conditions, I think it is high time that the public should be warned as to what is really taking place in our midst. Is it just that we should adopt in this disease the *laissez faire* policy, and allow lepers to carry on the various trades which they do at present, such as hawkers of fruit, vegetables, and fish, tailors, dressmakers, laundresses, buttermakers, and confectioners. I believe firmly that if the present *wacht en beejje* course is adopted,

we shall hand down to our posterity a disease which will prove, as it has already proved itself, to be the most loathsome scourge that the human race is subject to. Leprosy in the present day is found in all parts of the world—in India, Ceylon, Australasia, China, Canada, Russia, Norway, British Guiana, Dutch Guiana, Mexico, Brazil, New Brunswick, Northern and Southern Africa, and in fact, broadly speaking, it is found throughout the world. In India alone it is estimated that there are at present at least 100,000 lepers, and in Dr. Vandyke Carter's report in 1874, on Leprosy and Leper Asylums in Norway, with reference to India he states, speaking of the incurable wards of the Jamsetjee Jejeebhoy Hospital, "In them are usually found two, three, or four European lepers," and again, "I have myself lately seen three well-marked instances—viz., a boy at school, a young woman, and an adult military man. Bombay still harbours, in a crowded locality, a leper colony of the most wretched subjects—men, women, and children—and it is at least curious that the above three cases reside not far from this focus of loathsome disease." Now, what do we find exists here? Referring to a report of the Select Committee of the House of Assembly, in 1883, we find abundant evidence of the spread of leprosy in this country, and that the disease is slowly but surely gaining ground amongst the white population. The result of the inquiry of that committee is briefly and clearly stated, and the only known remedy pointed out—namely, "segregation," and yet practically nothing has been done. Acts of Parliament may be drawn up and are passed, but never promulgated, and still the evil grows, till one day there will be a rude awakening. Abundant evidence exists as to how this disease was dealt with in the past. The extremely harsh laws enacted by the State contrast strongly with the broad and Christian charity of the Church. The civil law in Europe in past ages made leprosy penal, a bar to approaching a house, a city, or entering a church, a disqualification from making a will or inheriting property. In 1224 the friars of St. Francis of Assisi first came to England and worked amongst the poor and leprosy, and carried on that marvellous work of Christian charity exemplified in the life of their founder, a charity which still lives, and is at the present day, after the lapse of more than six hundred years, carried on by the disciples of St. Catherine of Siena, who are at this moment tending the lepers of Trinidad in their hospital at "Corcorite." At the end of the 13th century compassion for the lepers so heroically inculcated by St. Francis, of Assisi, had extended so widely that in Britain there were 130 leper houses endowed. In France, in the year 1226, Louis the Seventh left legacies to no less than 2000 leper houses. I mention these historical facts merely to show to what an extent leprosy prevailed in Europe in times past, and what efforts were made to stamp it out. Are we then to gain nothing by the experience and teaching of these facts recorded, or are we to sit here with hands folded till at last this malady shall have grown so that we cannot cope with it. In times past segregation was the only remedy, which was firmly but kindly enforced, as well by the ecclesiastical as by the civil law. As in times past so it is in the present day. "Segregation" is the only course open, and if faced boldly now will in the end be the cheapest. What is the present expenditure of a few thousand pounds when weighed in the balance with the nation's health? What are the responsibilities of the present generation, if they dare through supine inertia to allow even the *possibility* of such a loathsome disease to

get a firm hold, so that future generations will have to do (as had to be done in times past) practically to battle for their lives before they can stamp it out. Of all the loathsome diseases from which humanity suffers, leprosy is the greatest, exhibiting as it does a rotting body and dulled intellectual capacity, a degraded form of animal passion and life, animal shape only remaining. Turning now from leprosy to another of our national disease problems, namely, syphilis, I ask what is the present condition of national health as regards this malady. It is evident on the face of affairs that this disease is slowly and surely on the increase. A straw will sometimes show how the wind blows, and at present we have *two* such straws before the public. The one is the action of the legislature in this matter, neglected as it is and has been by the Government of the present day, who up to the present time have contented themselves by putting questions to the municipalities and district surgeons, but who have really shown a masterly inactivity, fully exemplifying "how not to do it," as far as any practical advantage to the nation is concerned. On the other hand we have here a number of well meaning enthusiasts full of the very best intentions (is not a certain place paved with good intentions?) doing all they can to prevent any action being taken in the matter. These are two of the indications that the public mind is disquieted. But from other quarters are to be heard emphatic utterances. Already more than one district surgeon has drawn attention to the state of their districts as regards this disease, and how it is spread, and how it is infecting in many cases innocent people. More than one report can be found drawing attention to the overcrowding of our gaols, where the syphilitic, the leprosy, and the drunkard are herded together in one small cell.

THE GAOLS COMMISSION.

Whilst on this aspect of the subject it is interesting to notice the report of the committee on convicts and gaols. The gentlemen on this committee have laboured earnestly, well and conscientiously as far as their knowledge permitted them. But was there ever a greater act of shortsighted ignorance committed than setting such a committee to such a task without having on it one trained or scientific man thoroughly versed in hygiene? The industrious and conscientious element is no doubt well represented, but the most essential ingredient is left out, and one great part of their work from beginning to end has been the consideration of hygienic problems which they were evidently to a great extent incapable of grasping fully. For instance, in the report of the Wynberg gaol it is damned as one of the most disgraceful in the colony. This may or may not be so. But, assuming it to be so, the natural question arises—why? Because the committee discovered amongst other things a "rat hole" underneath the flooring, containing some stinking *débris*. *Fiat justitia, ruat cælum*. Now, the discovery of a rat hole shows a certain amount of industry, and is, no doubt, a matter of grave importance to any well-balanced mind, but to the mind of a hygienist other greater questions naturally arise. How about systematic overcrowding, the herding together of the diseased and debauched in small and badly ventilated cells, the increased death-rate, the possibility of an establishment becoming virtually a *focus for the subsequent dissemination of disease*? To what extent have these questions and others still behind them been dealt with? I say comparatively lightly indeed, for there was no trained and scientific expert on that committee capable of going into the root of the matter. Had it been so, something of far greater national impor-

tance than "rat holes" would have been probed to their very depths. And now, before leaving the question of the spread of venereal disease, I desire to say one word to those earnest souls who are filled with enthusiasm and good intentions, and who, to their credit be it spoken, are perfectly single eyed in desiring that syphilis should be let alone, or in other words be allowed to work its sweet will amongst the inhabitants of this fair land. I remember very well in my early days, as a medical student, how in considering the subject of the spread of syphilis, the various professors, with a sardonic smile, used to say, "Gentlemen, there is one way in which the disease may be propagated otherwise than in the usual orthodox manner," and then it was hinted that there was a bare possibility it might be propagated by contact and in wearing apparel, and in public closets and resorts. But this was a theory, which, though given as a possibility, was but very slightly credited as a reality. Now I may state on this head, speaking from my own professional experience, which has also been corroborated by some of my friends in this association, that many innocent people in this colony have been syphilised. For instance, a favourite practice among coloured nurses in country parts of this colony consists in chewing the infant's food first and thoroughly insalivating it, then removing it from their own mouth and giving it to the child. On examining the mouths of these people there will sometimes be found "Condylomata," an exact reproduction of which will often be found subsequently in the infant's mouth if infected. Thus, in this manner, the attendants, though filled with "good intentions" and with an earnest desire to aid the tender infant, practically do the opposite, and infect the helpless child with the terrible disease. Take another example actually occurring in private practice. The following extract from the notes of the case are instructive: "A healthy infant after a time (twelve months) was observed by its parents to become pale and flabby, its mouth, arms, and genitals developing sores (condylomata). Medical advice was sought. To shorten details of this case, after a careful search for cause and effect, it was decided to examine the nurse, a young coloured girl. On her genitals were discovered true syphilitic sores; she then admitted having contracted the disease, and also that she was in the habit of transferring some of the diapers used on her own person to the infant, and thus the innocent child became a victim. This infant subsequently infected its own mother, and so for a time proved a source of infection, and more than one in that family had to go through a course of special treatment before they could be pronounced cured." Some, perchance, on hearing the statement will say: a mere incident of a contagious disease spreading amongst a dirty and untidy family. Perchance they would be more surprised to learn that the reverse was the case, and that it was an instance of disease developing in a highly cultured family, and it was due to careful observation that the falling off in health of the child was in the first instance noticed. Here again was an instance of "good intention" on the part of an ignorant nurse, who in applying well aired diapers from her own person to that of this infant thus propagated the disease. I am of opinion that in this country there are special facilities for the spread of this fell disease to all; alas, very often to the tender and helpless innocent child who claims our protection; nay, indeed, they are often the first victims. And what further testimony need I add than that of a medical friend of mine practising here, who has seen more of syphilis

than any other practitioner here amongst the lower classes, when he tells me that a very large percentage, a percentage larger than I care to name, of the lower classes are syphilitised in Cape Town. I say then to those enthusiasts full of good intentions, beware of what you do when you strive to check useful legislation in this direction. In the name of humanity, and for the sake of suffering humanity, acquaint yourselves fully with the facts and the methods of the spread of the disease in this country, which in this great respect differs from the modes of propagation in European countries, before you take upon yourselves the great responsibility of allowing perchance some of your own descendants to be amongst the tender and innocent victims of this great scourge.

ALCOHOLISM.

Passing away from this subject, consideration for time forbids me to do more than touch upon some of its most salient points, I come to the third national disease problem in our midst, namely, "Alcoholism." Whatever differences of professional opinion and difference of personal professional experience we may have as to the extent and gravity of the two preceding diseases, I believe that upon this one subject our experience tallies, and our views on most of the aspects of this disease (for it really amounts to a disease in its worst sense when once fully established), will be in strict accord. In this present century there are evidences on all sides of the gravity of this great curse. Statistics are obtainable in most European countries on this subject; articles in all kinds of journals, both lay and professional, flood the literature of the present day, and are to be found treating of the question in some of its different aspects. Temperance societies, blue-ribbon armies, homes for inebriates, etc., all these are standing testimony to the gravity of the question on all sides. The term alcoholism conveys to our minds a distinct disease, and is a recognition to a certain extent of a modification of the present time of the manner in which alcohol is indulged in. In "the good old days" (an expression which must always be received *cum grano*) it seems to have been more frequently the custom that drink was indulged in more generally in the form of festivities, drunken carousals, or drinking bouts on certain occasions, or at the end of a day's work. This, although degrading and injurious to the bodily and mental health, left at least one loophole of escape for custom and fashion as it were fixed a time in which such indulgence was looked upon lightly, other hours of the day being sacred to abstinence and work, "*Nous avons changé tout cela*," and, eventually, the worst forms of alcoholism are seen in those who endeavour to unite both, and who are constant dram-drinkers, or indulge in "nipping" all day, endeavouring for a time, and succeeding for a time, in dovetailing two incompatibles, men who live under high pressure endeavouring, by the use of stimulants, to keep the flagging nervous energy up to its required standard. I recollect very well the teaching of twenty years ago, when perchance that time the popularity of alcohol as a remedial agent in disease reached its zenith, it was prescribed recklessly, and was looked upon by some schools as almost an universal panacea. It was only natural that, after a time, there should set in a great reaction, caused by the recognition of the evils which soon began to be traced to such loose methods of treatment until, at a comparative recent period, alcohol, as a remedial agent, reached its "nadir," and there seemed a tendency to shun its use altogether as such. In a recent annotation in the *Lancet*, I believe the views of

the majority of the profession are correctly expressed when the writer states. "alcohol is a powerful remedy in some cases, and it has been intemperately denounced by teetotallers. But it is a fruitful source of disease and degeneration, and the earnest physician will use it with care and discrimination." This expression of opinion, coming from such high authority, tallies with the views of our profession, and I would like to add that the terms "care and discrimination" do not merely refer to any given case of acute disease under consideration, but seem to my mind to refer more largely to the far greater question as to how far it ought to be used in a "dietetic sense," and how far and in what cases professional sanction should be given to its habitual use. For my own part I unhesitatingly subscribe to the declarations made by medical men in 1839, 1847, and 1871. They were to the effect: Firstly, that men in ordinary health do not require "alcohol"; secondly, that many people immensely exaggerate its value as an article of diet; thirdly, that the inconsiderate prescription of it by medical men has often given rise to the formation of intemperate habits; and, fourthly, that it should always be prescribed by medical men with as much care as any other powerful drug in such a way as to be no excuse for excess or for continuance of its use when the need for it has ceased. We are all well aware that the teaching and experience of the present day leads us to endorse these statements, and that some very high authorities go even much further than this. Through the kindness of a friend I have been forwarded a memo, giving some information as to what other countries have done with reference to *Liquor Legislation*. A report from Mr. Phipps, of the Embassy of Vienna, just issued by the Foreign Office, discusses a bill for the regulation of the liquor traffic in Austria, recently presented by the Government to Parliament. It is intended to combat the social effects of drunkenness, a vice which has made great progress during recent years in Austria. The statistics cited at the Vienna Hygienic Congress also afforded proof of the salutary effects of the legal restriction imposed on alcoholism. Fifty years ago, in Sweden the average consumption of alcoholic drinks was fifty-four litres per head per annum; now, owing to legislation, it is only eight litres per head. In Norway a reduction of from sixteen litres to three and a half litres per head has been effected, while in the Netherlands the number of brandy shops has been reduced from 43,000 in 1881 to 27,295 in 1885. By the new Austrian *projet de loi* licences are required for trade in liquors in less quantities than five litres, no other trade can be carried on where liquor is sold, not even that in eatables, except in hotels and dining rooms. "This stipulation is regarded as of exceptional importance, inasmuch as shops in small localities are frequented by all classes, and women and children, who would be ashamed to visit or frequent public-houses, acquire in them a taste for strong liquors. The number of public-houses is restricted to one for every 500 inhabitants." Communities with less than 500 inhabitants cannot have more than one public-house. Shops where spirituous liquors are sold must be closed from five o'clock in the afternoon of the day preceding Sundays or feast days till five a.m. of the next succeeding working day. This does not affect dining rooms. Debts incurred for liquor in quantities of five litres and under are not recoverable at law if the debtor can be proved not to have paid a similar debt previously. All mortgages or guarantee bonds or promises given for such claims are null and void. Persons convicted three

times of drunkenness may be prohibited by the local authorities from visiting any public-house in his neighbourhood for a year. This law is mainly founded on Dutch legislation. Now, so much for legislation in this direction to-day in the "old world"; let us now turn to the "new" and see what is being done there to-day. Another publication (Miscellaneous Series) from the Foreign Office deals with the report of Mr. Edwards, of the British Legation at Washington, describing "various methods of restricting liquor traffic in the different States of the Union." He shows that two general principles of action are carried out on different lines, the one being that of total and rigid prohibition; it exists in five States, Iowa, Kansas, Maine, Rhode Island and Vermont; the other the "high licence system." Thus the tax for licences has been raised all over the country, and in the Salt Lake City reaches £ 240. On the respective advantages of the "prohibitory" and "high licence" systems there is much to be said, the tendency being at present in favour of the "high licence system." It is being rigorously enforced in Pennsylvania. It gives the Courts the sole powers of granting licences to sell liquor, and makes each licence fee 500 dols. In Philadelphia the number of liquor shops, which exceeded 6,000, were reduced to 1,200 in June, 1888. In Pittsburgh from 727 to 225. In Alleghany County from 1,551 to 485. I should only weary you if I were to attempt even to give a list of authorities and writers on this subject, indeed, it would be most tedious to you and impertinent on my part were I to do so, but I will ask you to consider with me what position does "alcoholism" occupy in this country as a *National Disease Problem*, and how far are we as medical men (for our personal responsibility in this matter is clear and pressing) endeavouring to cope with it. I have shown that this is a burning question in the present day in all countries, and that the tendency in all the older countries is to deal with the growing evil by special legislation as far as possible, and in that way aid and countenance the efforts of the more enlightened and philanthropic section of the community. In this country, South Africa, we have at the very outset great natural difficulties to contend with, so far as this question is concerned. We have diversities of thought in the different European races, we have diversities of race from the more or less cultured European to the raw native, we have here also that terrible obstacle *vested interests* to overcome, and worst of all we have in our midst facilities for the production of alcohol at almost a nominal cost. Taking even these few factors into consideration it is at once seen what an uphill task it is to stem the present torrent of inebriety which is sweeping over the land, but in reality such difficulties should be additional incentives to us to gird up our loins for the struggle. Now this may be deemed by some of you not the time nor the place for indulging in any remarks which might be construed into having any political bias or meaning. To anyone who thinks so I unhesitatingly reply that with partisan politics as a body we have, thank God, in such a matter neither lot nor part, but I equally unhesitatingly aver that as a profession, if we see a gigantic evil so glaringly thrust under our notice, we should be false to our duties, false to all sense of our trust as guardians of "private and public health," if we do not give such subjects our most careful thought and fearlessly express our convictions openly. As a profession I believe in our private capacity we conscientiously carry out in our methods of treatment the greatest care in the use of alcohol, but our duties do not end there. Is

there one of us who has not seen (however short the experience may have been), disease, crime, and death, as the results of alcoholism? Is there one of us who has not seen untold misery and unhappiness, aye even in the very highest circles as well as the lowest, by the demon of alcoholism, and what greater unhappiness is there than the gilded misery sometimes met with—I was going to say in palaces, but I will say the dwellings of the rich? Is there one of us who does not know that the sufferer from alcoholism eventually becomes dulled to everything, first to a sense of honour in *small* and what he *considers* trivial things, till eventually he gradually sinks into the abyss which places him finally on the level with the *liar*, the *thief* and the *murderer*?

APPEAL TO LEGISLATION.

Is there one among us does not know what an enormous factor in the production of disease alcoholism is? I have had conversations with professional friends in various parts of the world, and all are agreed on that point. Some even have averred that as much as nine-tenths of disease is due to "Alcoholism." This may or may not be an overstatement of the case, but the facts are patent to all of us. With such facts pressing upon our consciences it is our bounden duty to direct the attention of our legislators to this crying evil, and to ask them what are you doing to arrest this terrible and rapidly growing disease? Are not our gaols full to overflowing? Are not our hospitals crowded? Do we not meet staggering along the road at all hours the drunkard? Are not our native races being decimated by this great curse? Is not the evidence on all sides clear and overwhelming? Is there not the wonderful example of a native chief (Khama) resolutely putting his foot down as far as his own territory is concerned, forbidding the introduction of liquor into it, a striking proof of how the natives themselves feel an intuitive terror of its powers and beseech us not to tempt them? In our own colony, where wine is sold at 1d. and 1½d. per bottle, and brandy from 4d. to 6d. a bottle, what restriction and what endeavours as a community are we making to defend our weaker brethren of all classes and colours and sex from this great curse. In sorrow and anger I say no effort is made. Legislation at present here (with a need of serving vested interests) is tending to do away with all restrictions in the liquor trade. Restriction did I say, rather should I say it is giving every "facility" for the spread of this great disease. Larger and new areas for the sale of liquor are opened up by special Acts of Parliament. It is but a few days ago since the *Cape Times* drew attention to the fact of a farmer hawking brandy about the very streets of Cape Town, an anker of brandy, equivalent to about 8½ gallons, being sold to a number of Kafirs, who had clubbed together, for ten shillings. Under such circumstances have we, as a profession, no public duties to perform? I feel confident the answer is in the affirmative. Have we no duties to perform for the public when criminal debauchery is ever in our midst? Have we no duties to perform when we read, as we did a few months ago, of a cruel murder being done—I had almost well nigh said at the very gates of him who now holds the office of Prime Minister of this colony, the very deed being the outcome of the actual disease I am here considering? This special case may seem to some merely a coincidence, and no doubt here attracted considerable attention, but remember it is only one of many like incidents which have escaped public scrutiny, and is only one of the links in that "chain" of moral debasement

which the present Government are helping to weave round the inhabitants of this country—a chain which, when once firmly woven, will bind men more securely than the strongest fetters of iron, and will, eventually, leave behind an indelible national stain in the sight of God and man. Various crimes are punished according to law, and the law, through its administrators, shields the community at large; but we may ask, as the old Romans asked, "*Quis custodiet ipsos custodes?*" Knowing these things, it is, therefore, our bounden duty, I think, as far as in our power lies, to strengthen the "feebleness of our legislators, or, if you prefer it, the Government; aye, and to compel them, if need be, to the better course. For what is more criminal than to know the better way, but, for temporary expediency, to choose the worst." Are we not justified in applying to such men the solemn warning: "For it must needs be that offence come, but woe unto that man by whom the offence cometh." For I firmly believe—and so do you—that no solid good can accrue to any community unless its laws and its law-makers are single-eyed as far as national health is concerned.

FROM GENERATION TO GENERATION:

A PRELUDE TO THE STUDY OF HEREDITY.

By R. A. DOUGLAS LITHGOW, LL.D., M.R.C.P. ED., F.S.A., F.R.S.L., ETC.

(Continued from p. 344.)

Diseases of the Skin.—Anatomically and physiologically there can be no question as to the heritability of certain peculiarities of skin, some of which are, more or less, predisposed to certain morbid dermatological conditions. Some of the recorded cases of physiological and anatomical abnormalities of the skin are very interesting, and all the more so from the fact of their having been transmitted through many generations. The well-known case of the Lambert family is peculiarly interesting, as affording indisputable evidence of the transmissibility of an abnormal condition of the skin, which descended through at least five generations. The peculiar affection from which the family suffered consisted in their skin being covered with indurated, horn-like excrescences, affecting the entire body, except the head, soles of the feet, and palms of the hands. Edward Lambert, one of the earliest, if not the first member of the family so affected, had six children, only one of whom ultimately survived; but each of them had manifested the same peculiarity when six weeks old. The surviving son married, and all his male offspring were similarly affected, this extraordinary cutaneous condition having descended through at least five generations. Corns, and the indurated brawny cuticle of the feet in those who walk bare-footed, present a somewhat analogous condition of skin.

Another striking instance of the transmissibility of abnormal physiological phenomena is presented by the case of Andrian Jeftichjew and his son Fedor, who were exhibited on the continent and in England a few years ago, and whom I had an opportunity of examining during their stay in London. In Paris they were called *les hommes chiens*, and in London, the dog-men, Andrian's face being so covered with hair as to present a striking resemblance to the face of a Skye terrier. His excessive capillary development is not true hair, but simply an abnormal growth of the *down* or fine hairs which usually cover nearly the entire surface of the human body. Strictly speaking he has neither head-hair, beard, moustache, eye-brows, nor eye-lashes, their place

being taken by this singular growth of long silky down. In colour this is of a dirty yellow: it is about three inches in length all over the face, and feels like the hair of a New-foundland dog. The very eye-lids are covered with this long hair, while flowing locks come out of his nostrils and ears. On his body are isolated patches, strewed, but not thickly, with hairs one and a half to two inches long. The son, Fedor, who was exhibited in company with Andrian, was illegitimate, and about three years of age. Andrian's legitimate children, a son and a daughter, both died young; nothing is known of the former, but the daughter resembled the father. The growth of down on Fedor's face is not so heavy as to conceal his features, but there is no doubt that when the child comes to maturity, he will be at least as hirsute as his parent. The hairs are as white and as soft as the fur of the Angora cat, and are longest at the outer angles of the eyes. There is a thick tuft between the eyes, and the nose is well-covered. The moustache joins the whiskers on each side, after the English fashion, and this circumstance gives to accurate pictures of the child a ludicrous resemblance to a well-fed Englishman about fifty! As in the father's case, the inside of Fedor's nostrils and ears has a thick crop of hair. Both father and son are almost toothless, Andrian having only five teeth, one in the upper jaw, and four in the lower, while the child has only four teeth, all in the lower jaw. In both cases the four lower teeth are all incisors. To the right of Andrian's one upper tooth there still remains the mark of another, which has disappeared. That beyond these six teeth the man never had any others, is evident to any one who feels the gums with the fingers. The deficiency of teeth, accompanied as it is by what is in reality a deficiency, not a redundancy of hair, accords well with Darwin's view that a constant correlation exists between hair and teeth. He mentions as an illustration the deficiency of teeth in hairless dogs. The tusks of the boar, again, are greatly reduced under domestication, and the reduction is accompanied by a corresponding diminution of the bristles. He mentions also the case of Julia Pastrana, a Spanish dancer or opera singer, who had a thick masculine beard and a hairy forehead, while her teeth were so redundant that her mouth projected, and her face had a gorilla-like appearance. It should rather be said that in general those creatures which present an abnormal development in the covering of their skin, whether in the way of redundancy or deficiency, present generally, perhaps always, an abnormal dental development, as we see in sloths and armadilloes on the one hand, which have the front teeth deficient, and in some branches of the whale family, on the other, in which the teeth are redundant, either in number or in size.

To the foregoing cases many more might be added showing the undoubted heritability of cutaneous physiological abnormalities; but I would now go further, and assert that the differentiation of individuals from one another, in consequence of heredity and variability, includes differences in the structure, functions, quality, and complexion of the skin, which are not only more or less hereditary, but which, however normal they may appear, will more or less predispose the skin to disease. These family and individual normal differences in the structure, functions, quality, and complexion of the skin are everywhere known and recognised, so that I need not here allude to them in any detail further than to state that, *ceteris paribus*, many of them predispose their possessors to certain morbid dermatological conditions.

It is well to remember at the outset that "there is nothing essentially special in the details of cutaneous pathological changes as compared with those which may occur in other parts."¹ In other words, between the facts of general and skin pathology there has recently been demonstrated such a general similarity that the same appearances, changes, and causes in morbid action are recognised in the diseases of the integument, as in the pathological conditions of other parts of the body. It is also necessary that the part played by various concomitant conditions in each individual should be estimated and appreciated, as these undoubtedly modify the character and derivation of the particular disease that may be present.

Without attempting to give any detailed classification of skin diseases—infinite in their variety of forms, as multitudinous in the names given to them—I may be permitted to roughly formulate them in the following ten groups, as given by Dr. Tilbury Fox—viz., the eruptions of the acute specific diseases; local inflammations; diathetic diseases; hyper- and atrophic disease; new formations; hæmorrhagic, neurotic, and pigmentary diseases; and disorders of the hair and glands and their appendages. With the exception of the first—viz., the eruptions of the acute specific diseases—which I have already discussed—and, perhaps, some of the parasitic diseases of the hair, there is not one of these forms which does not come, more or less, under the influence of heredity. With regard to these two exceptions, heredity, as I have elsewhere stated, shows its potency, as in the whole range of organic life, for it develops, sustains, and perpetuates the specific characters of the germs in the one, as it develops, sustains, and perpetuates the specific characters of the parasites in the other. How else could they be handed down unaltered in their specific characters, from generation to generation, except in accordance with the all-pervading universal law, roughly estimated by Lamarck—viz., "Like begets like;" and "Each after his kind," as the Mosaic record has it? As I have said repeatedly before, there is no escaping the law of heredity, for it is as necessary for our development and perpetuation as the act of generation, or the air we breathe!

The causes of skin diseases may be thus stated:

(a) Internal, or those which act from within the system upon the skin.

(b) An innate disposition in the skin tissues themselves to take on a diseased action.

(c) External, or those which act from without the system upon the skin. (Fox.)

I am here only concerned with the two former, in which many of the causes are hereditary; but as similar diseases may arise from a combination of both of these causes, it may be expedient to consider them together, or rather to consider those morbid conditions of the skin in the causation of which both these sets of factors are implicated. It may, indeed, be said that the majority of skin diseases are dependent upon both for their causation, as we may see in cases of erythema in a rheumatic subject, in connection with dyspepsia; eczema in a gouty subject, dependent upon mal-assimilation; psoriasis in a scrofulous subject, dependent upon alteration of the normal healthy character of the blood; pruritus in connection with gout, hepatic derangement, or diabetes. Here, for example, in cases of erythema in a rheumatic subject, in connection with dyspepsia, the dyspepsia is an internal cause, dependent more or less upon

the rheumatic diathesis; mal-assimilation an internal cause, dependent upon the gouty diathesis; alteration of the normal condition of the blood dependent upon the scrofulous diathesis, and so on; the first producing erythema, the second eczema, and the third psoriasis: and in this connection it may be well to emphasise the axiom that the true cause of the state of any given disease is made up of a number of phenomena or agencies in combined operation. Excluding such non-hereditary agents as the acute specific poisons, medicinal substances, deleterious articles of food, etc., which may produce skin disease, we still have amongst the *internal causes* those more or less depending upon heredity, including gout, rheumatism, syphilis, leprosy, certain conditions in which injurious substances enter the current of blood, or are retained in it in undue proportions, as dyspepsia, mal-assimilation, functional uterine disturbance, and various morbid conditions of the liver, kidneys, and intestines; also certain conditions of the nervous system, producing hyper-æmia and urticaria, herpes, pemphigus, anæsthetic leprosy, and that impaired functional power involving loss of control over the skin nutrition, allowing morbid action of all kinds to take place more readily.

Concerning the innate disposition in the skin tissues themselves to take on a diseased condition, it is pretty certain, as Dr. Tilbury Fox observes, that many diseases of the skin must originate in a disordered behaviour of the tissues themselves, and do not necessarily depend for their cause upon any general defect of nutrition. For instance, cancer is a case in point; and so also warty growths of all kinds, fibroma, keloid, and perhaps lupus, are other illustrations of the same thing. In some cases there is just an excess of growth, a *plus* state of the nutrition of the tissue, and nothing more (hypertrophic); or it may be a *minus* condition (atrophic). In other instances it is a perverted nutrition, a deviation in the type of the tissue, as in cutaneous cancer. The epithelial layers may be mainly affected, as in warts, corns, xeroderma, and ichthyosis, or the connective tissues of the skin may be specially involved, as in keloid, fibroma, morphea, and scleroderma. Moreover, all the diseases of the sweat glands and follicles—of the sebaceous glands—of the hair and hair follicles, and of many of those of the nails, belong to the same category, and are all subject to the influence of heredity.

As showing how predisposition and insusceptibility—both of which I have elsewhere proved to be more or less the result of heredity—may influence parasitic diseases of the skin, I may here quote from Dr. Alder Smith, who says:—"All children are not equally susceptible to ringworm. A certain *unknown condition* of the skin is necessary for the growth of the fungus. Some children never take ringworm, though certainly liable to become infected . . . On some the fungus takes but slight hold, and is easily destroyed; others again appear to be extremely susceptible . . . The difference in these cases must depend on some peculiar nutritive condition of the soil or material in which the fungus develops, or upon some special state of the general health or constitution. In fact, the *state of the soil* is a most important condition, and the rapidity with which a small spot of ringworm will *spread* before it comes under efficient treatment, depends chiefly upon the peculiar and unknown condition of the soil or nidus." In seeking to account for this "unknown condition," whether of the nature of predisposition or insusceptibility, I maintain that it depends upon idiosyncratic peculiarity in the structure of the infected

¹ Dr. Tilbury Fox.

parts, which, like all other idiosyncratic conditions, has been transmitted hereditarily. Having already discussed the idiosyncrasies of structure represented by certain inherited proclivities of tissue, I need not refer to them here in any detail further than to state that they account for those predispositions and insusceptibilities referred to by Dr. Alder Smith above, and are very frequently the primary causes of such skin diseases as ichthyosis, psoriasis, xanthelasma, molluscum fibrosum, etc., and probably also of "steatomata of the scalp, lipomata, adenomatous tumours in the breast, multiple uterine fibroids, milium, whether on the face or elsewhere, and a host of others."¹

As illustrating further, and more forcibly, the inherited proclivities of the integument I may here refer to the various forms of acne, which undoubtedly denote original and heritable peculiarity in the structure of the skin. As Mr. Hutchinson says:—"The location of acne on the face is probably often explained by pre-existing peculiarities in the state of skin of the face . . . Acne is very constantly hereditary, the same form often prevailing in several members of a family, and acne tuberosa, I believe, often descends in several generations from father to son." The differences in the various forms of acne are accounted for primarily by differences in the skin in the affected individuals, and these differences may be said to consist in relative thickness of the skin, and a hyper-development of the sebaceous system, which are unquestionably subject to heredity.

Eczema is another affection dependent more or less upon a constitutional proclivity, which is also hereditary. Usually associated with gout, scrofula, or neurasthenia, eczema may result from either of these conditions, all of which are hereditary, and it may be safely asserted that those individuals who have inherited the gouty, scrofulous, or neuropathic diathesis are especially predisposed to eczematous affections. Eczema must be regarded as practically the most important of cutaneous diseases, if only on account of its comparative frequency, including as it does more than one-third of all cases of those diseases which come under treatment. It is also remarkably protean in its manifestations, showing itself under the most varied forms. The predisposition to eczema differs to a remarkable extent in different individuals. As with some persons every trifling irritation of the stomach gives rise to gastric catarrh, so in others a mere chafing of the skin will cause an attack of eczema. Amongst the predisposing conditions to this affection may be mentioned chlorosis, rachitis, scrofulosis, gout, albuminuria, diabetes, dyspepsia, gastric and intestinal catarrhs, dysmenorrhœa, uterine affections, lactation, and pregnancy. Psychical influences may also be the immediate cause of the complaint where a predisposition exists. Persons having a very delicate skin are more liable to eczema, and susceptibility in this direction is also increased by repeated attacks. That eczema is in itself hereditary, beyond a mere predisposition to it is also beyond doubt, as several authors have met with frequent instances of its occurrence by descent. That so few have recorded such cases is probably due to the fact that in private practice only the most inveterate cases come under notice, in which category hereditary eczema must undoubtedly be placed. For example, a girl of sixteen was placed under the care of Drs. Veiel (*pere et fils*) by her father, a medical man. He himself, and his mother, as also his second daughter, were sufferers from the complaint.

¹ Hutchinson.

Similar examples might be multiplied. Eczema is observed with special frequency in scrofulous and phthisical families.¹

Psoriasis is another well-known skin affection in which heredity, if not its sole cause, plays a very prominent part, and illustrates many of its peculiarities, as atavism, etc. No rigid proof, says Weyl, can be brought at present that psoriasis develops *de novo*, or can be produced mechanically or chemically. Bazin regards it as a constitutional diathesis, mainly hereditary, which is either of arthritic or herpetic origin, and gives, as he imagines, the characteristic differences of both forms. Others assume principally a single, unknown, internal cause—the dartrous diathesis. Weyl, further, considers it probable that it is due to a functional weakness of the nervous centre regulating the nutrition of the skin, dependent on hereditary taint; this view is favoured by the constant monotonous form of the efflorescence, and its tendency to symmetrical development. The anatomical process is merely the peripheral projection of the functional central disturbance. According to Neumann, prurigo and ichthyosis have never been found associated with psoriasis, showing that all dermatoses may be combined, and that a number of them exclude one another.² There can be no doubt that psoriasis not uncommonly occurs in several members of a family, and that it may be transmitted for several generations. Dr. McCall Anderson's view as to the cause of this affection is that it is an inherited perverted tendency of tissue formation, which tendency lies dormant until called into activity by some exciting cause; and it is probably not due to a special blood condition, or dyscrasia, or diathesis, but is due to a peculiar morbid tendency of parts of the skin, which is obviously hereditary. In other words, it is neither primarily nor altogether due to any condition of the blood or nervous system, but its causation materially consists in an inherited proclivity of cutaneous tissue—an idiosyncrasy in the structure of the skin itself. Mr. Hutchinson explains the entire absence of psoriasis in infancy and early childhood by suggesting that when the structural idiosyncrasy is very strong, it may manifest itself in a different form. Thus, he thinks it not improbable that the ichthyosis of infants may be in this way the representative of the psoriasis tendency in its intensest form. Psoriasis is, therefore, markedly hereditary, persisting through many generations, and will sometimes be found to undergo apparent transmutation with other forms of skin disease, as nummular eczema, lichen ruber, and pemphigus.

Of all other skin diseases, none affords such direct proof of its hereditary character as ichthyosis, which generally occurs in several members of the same family, but frequently omits a generation, or fails to descend in the direct line. Hardy goes even so far as to assert that if other members of the family are not found affected with ichthyosis, this disease will certainly be found affecting some near friend of the patient's. There are many instances on record where the disease was transmitted from mother to son, and from father to daughter, although usually transmitted to those of like sex. Its frequent occurrence in brothers and sisters, without any external influences being recognised, is further proof of the hereditary nature of ichthyosis.³

Of the other skin diseases—and their name is legion—I maintain that there is scarcely one of them—not one of them, in fact, of a constitutional character—which is not more or less subject to the law of heredity, either as an

¹ Dr. Th. Veiel (Ziemssen).² Dr. Weyl (Zeimssen).³ Dr. E. Lesser.

actual or predisposing cause. To discuss those forms which I have left unnoticed in any detail would occupy more space than I can at present command, and would, after all, be a work of supererogation, as the various forms already referred to are not only in themselves the most important among the dermatoses, but may be said to fairly represent the various classes of cutaneous affections. Whether, therefore, of the nature of local inflammation, diathetic diseases, hyper- or atrophic disease, new formations, hæmorrhagic, neurotic, or pigmentary diseases, or disorders of the hair, glands, and their appendages—heredity is a potent factor in their production, either by actual transmission, or a predisposition resulting from inherited morbid proclivity in the tissue of the skin itself.

I have already said that the details of cutaneous pathological changes manifest nothing essentially special, as compared with those occurring in other parts of the body; and thus, in the local inflammations of the skin—whether erythematous, catarrhal, plastic, or suppurative—we find the inflammatory process identical with that in other parts, and in this connection it should be remembered that the more frequently the tissues have yielded to any special process of inflammation, the more prone they are to yield again;¹ and thus, a diathetic condition may be established in an individual, who may transmit the same to his offspring. It is, at any rate, a well-known fact that while some individuals and families are especially predisposed to inflammatory processes, others are not, and it is amongst the former that local cutaneous inflammations generally occur. With regard to the cutaneous eruptions which are known to be local manifestations of diathetic states, and which include scrofuloderma, syphiloderma, leprosy eruptions, framboesia or yaws, etc., it goes without saying that heredity is a potent underlying element in their production.

In those affections of the skin included under the names hypertrophic or atrophic, there is essentially an innate disposition in the skin tissues themselves to take on a diseased condition, and the same may be said of the majority of the diseases of the sweat and sebaceous glands, of the hair, follicles, and nails. In the former category are included, amongst the hypertrophic variety, warts, corns, xeroderma, ichthyosis, keloid, fibroma, morphea, and scleroderma; and amongst the atrophic, senile and linear atrophy, and general marasmus. As these are all more or less dependent upon an inherited predisposition in the integument itself, it is evident that here, too, heredity is of prime importance in their production.

Concerning new formations, I have elsewhere shown that they depend upon diathesis, constituting as they do one of the diathetic varieties. This group includes lupus, cancer, rodent ulcer, and xanthelasma. Mr. Hutchinson regards the former as "a sort of cross produced by tendencies at once to scrofula and cancer, and that it receives many modifications from peculiarities in the patient's skin, and his morbid tendencies in one or the other direction." Much the same may be said with regard to rodent ulcer, and as to cancer I must refer the reader to what has already been said as to the diathesis of malignant new growths. Xanthelasma is, "in part a new growth, and in part a fatty degeneration," depending upon long hereditary descent, and may be regarded as the original offspring of the hepatic diathesis.

¹ For a detailed discussion of this interesting subject, the reader is referred to Mr. Jonathan Hutchinson's most admirable and very suggestive work, "The Pedigree of Disease," to which the writer is under many obligations.

Of the hæmorrhagic division of skin diseases purpura is the only illustration, and it is said to be non-hereditary; if so, it must be regarded as the exception which proves the rule! Although it has been asserted that this condition depends upon a morbid alteration in the liquor sanguinis, and that it also involves an affection of the vaso-motor nervous system, as a matter-of-fact nothing definite is known as to its etiology. As to its being the result of a diseased condition of the vascular system, which has also been stated, although evidence of any anatomical alteration in its structure is wanting, "yet there are certain conditions in which a disease of that structure must be presupposed, which exist whenever slight causes give rise to hæmorrhages in parts far distant from each other, and which constitute what is known as the *hæmorrhagic diathesis*."¹ I have elsewhere shown that, according to Mr. Jonathan Hutchinson and others, this diathesis is the result of the long descent of gout; and why, may I ask, should not purpura be the result of the complicated agencies of heredity acting and reacting on human tissues, amid various morbid conditions for an indefinite period, until it is produced in certain individuals? If all our tissues, whether in health or disease, are subject to heredity, I do not see why this comparatively rare condition—whether dependent upon vascular or vaso-motor change, should not occasionally be evolved in the case of certain individuals, as the result of complicated tissue proclivities which have been inherited. Until, however, the exact pathological conditions which engender purpura are thoroughly established, I am content to allow this affection to remain amongst the category of those whose dependence upon heredity is "not proven." It should not, moreover, be forgotten that a purpuric condition is also associated with scurvy, and that this latter affection is included amongst the diet-diatheses by Mr. Jonathan Hutchinson.

Amongst the neurotic affections of the skin are included hyperæsthesia, anæsthesia, and pruritus. The two first are so evidently dependent upon neurasthenic or neuropathic conditions, which are admittedly hereditary, that they need only be mentioned; and the latter can only be included amongst those cases of idiosyncratic susceptibility in which the skin is inherently hypersensitive, as manifested by the different results produced upon different individuals by the bites of various insects, contact with woollen clothing, etc. Of those cutaneous affections depending primarily on deposit or alteration of pigment, and including melasma and leucoderma, nothing much can be said, as nothing definite is known as to their causation. They are, however, of little importance, and what I have said as to purpura will apply equally to them. It may, however, be remarked that certain individuals and families are more subject than others to the forms of pigmentation, resulting from exposure to the sun, and that chloasma gravidarum characterises many families during the pregnant state.

Instead of considering the multitudinous forms or varieties of skin affections in detail, I have preferred, for obvious reasons, to deal with them for the most part synthetically, and have now referred to the various groups into which every case of skin disease must fall. I have subjected each group to an examination as to how far heredity can be regarded as an element in its production, and I think I have shown that, in at least the majority of them, hereditary transmission or predisposition is an etiological factor of essential importance.

¹ Professor Ernst Schwimmer.

My observations on the all-pervading law of heredity must now draw to a close. I can only hope that the results of my study may be as gratifying to my readers, as the task has been to myself, and that, at least, some good may have been effected in consequence of my inquiry. I have for, I believe, the first time, subjected the various diseases and disorders to which the human body is liable, to an examination as to how far they are the results of, or referable to hereditary transmission, and in the words of Mr. Jonathan Hutchinson, to whose labours I owe so much, "It is abundantly sufficient for my ambition, if, availing myself thankfully, so far as my knowledge extended, of the labours of those who have gone before me, I have succeeded in any degree in making opinion more definite, and giving emphasis to that which is true."

In conclusion, the following summary of the views enunciated in these papers may not be altogether unacceptable.

(To be concluded in our next.)

ON SOME OF THE COMMUNICABLE DISEASES OF MAN AND THE LOWER ANIMALS, WITH REMARKS ON THEIR ORIGIN AND RELATION.¹

BY PROFESSOR EDGAR CROOKSHANK, M.B.,

OF KING'S COLLEGE, LONDON.

I PROPOSE to bring to your notice some of the diseases communicable from the lower animals to man, and to discuss certain points in connection with their origin and relation; and I shall also deal with those diseases in man, which have been *alleged* to arise from diseases of the lower animals. The diseases to which I refer I shall divide, for the purposes of discussion, into three groups. First, I shall draw your attention to some communicable diseases which are transmitted to man, but do not arise in man independently of the lower animals, such as cow-pox, foot and mouth disease, anthrax, and glanders.

Cow-pox.—Jenner was the first to describe the disease which had been known in the dairy counties from time immemorial as the "cow-pox," and his publications lead to a careful study of the diseases affecting the teats of cows. I will quote verbatim the description which Jenner wrote in his "Inquiry," as it contains his views as to the origin of cow-pox, and gives a graphic account of the transmission of the disease to the hands of the milkers.

"There is a disease to which the horse, from his state of domestication, is frequently subject. The farriers have termed it *the grease*. It is an inflammation and swelling in the heel, accompanied in its commencement with small cracks or fissures, from which issues a limpid fluid, possessing properties of a peculiar kind. This fluid seems capable of generating a disease in the human body (after it has undergone the modification I shall presently speak of) which bears so strong a resemblance to the small-pox that *I think it highly probable it may be the source of that disease*. In this dairy country a great number of cows are kept, and the office of milking is performed indiscriminately by men and maid-servants. One of the former having been appointed to apply dressings to the heels of a horse affected with the malady I have mentioned, and not paying due attention to cleanliness, incautiously bears his part in milking the cows, with some particles of the infectious matter adhering to his fingers. When this

is the case, it frequently happens that a disease is communicated to the cows, and from the cows to the dairy-maids, which spreads through the farm until most of the cattle and domestics feel its unpleasant consequences. This disease has obtained the name of *The Cow-pox*. It appears on the nipples of the cows in the form of irregular pustules. . . . Inflamed spots now begin to appear on different parts of the hands of the domestics employed in milking, and sometimes on the wrists, which run on to suppuration, first assuming the appearance of the small vesications produced by a burn. . . . Absorption takes place, and tumours appear in the axilla. . . . These symptoms, varying in their degrees of violence, generally continue from one to three or four weeks, leaving ulcerated sores about the hands, which from the sensibility of the parts, are very troublesome, and commonly heal slowly, frequently becoming phagedænic, like those from whence they sprung. During the progress of the disease, the lips, nostrils, eyelids, and other parts of the body, are sometimes affected with sores, but these evidently arise from their being heedlessly rubbed or scratched with the patient's infected fingers. . . . Thus the disease makes its progress from the horse, as I conceive, to the nipple of the cow, and from the cow to the human subject."

I need hardly say that as this disease is one of the sources of lymph employed for affording protection against small-pox, it is of immense interest and importance. It is therefore much to be regretted that the clinical history of the natural disease in the cow has been, until recently, so much neglected in this country both by the veterinary profession and our own. It is commonly supposed that both cow-pox and horse-pox have been absent from this country during the long period succeeding the outbreaks described by Ceely and Estlin; but inasmuch as outbreaks have been comparatively common during this period in other countries, it is far more probable that outbreaks have occurred in England, but have been concealed, overlooked, or wrongly diagnosed. I shall again refer to Jenner's Inquiry in speaking of the alleged origin of small-pox. I shall therefore now pass on to describe another vesicular disease affecting the cow's teat—of especial interest to us, as the virus is conveyed by the milk.

Foot and Mouth Disease.—This is a highly contagious and infectious febrile disease, characterised by a vesicular eruption affecting the lips, tongue, roof of the mouth, and the feet of sheep, cattle, and pigs. Sometimes the mouth only is affected, in other cases the feet may be the principal seat of the eruption. In milch cows it sometimes happens that the eruption occurs on the udder and teats, and it is this manifestation of the disease which has received so much attention from Rayer. The milk is contaminated by the discharge of the vesicles, and is unfit for use, either as food for the human being or for the lower animals. It induces a vesicular eruption in the mouth, larynx, pharynx, and intestinal canal. It acts most vigorously when administered warm to young animals, and calves occasionally die quite suddenly after sucking cows affected with the eruption on the teats. Fatal effects also result when the milk is administered to young pigs.

It has been stated that no injurious consequences arise from the consumption of the milk by human beings, but there is abundant evidence to the contrary, and the conflicting opinions probably arise, as Brown has pointed out, from the fact that milk is seldom drunk direct from the cow, and rarely in an undiluted form. Hertwig experimented upon himself with milk freshly drawn from a cow

¹ A paper read at the Annual Meeting of the Midland Branch of the British Medical Association, held at Nottingham, June 14th, 1888.

with the eruption. He drank a pint, and two days afterwards experienced slight fever, restlessness, and headache. The mouth was dry and hot, and there was tingling in the skin of the hands and fingers. These symptoms continued for seven days after taking the milk. On the ninth day vesicles had formed on the tongue, principally on the edges, and on the mucous membrane of the cheeks and lips (the largest being about the size of a lentil). They were yellowish white in colour, and contained a whitish turbid liquid, which flowed when the vesicles were pricked with a needle. At the same time a number of vesicles developed on the hands and fingers; the greater part of them at the time of their first appearance were the size of a millet seed. They were firm to the touch, yellowish white, and occasioned a slight tingling. The vesicles of the mouth increased in size and broke, and the epithelium detached itself completely from the affected parts, leaving dark red spots, which disappeared gradually. The slight fever present during the first days ceased after the appearance of the eruption; but counting from this date to the disappearance of the red spots, Hertwig felt a continual burning pain in the mouth, and speaking and deglutition caused considerable uneasiness. On the lips the vesicles dried up, and were covered with thin brownish crusts, which fell off ten days after the appearance of the first vesicles. The vesicles which developed on the hands ran a slower course. From the tenth to the thirteenth day they filled with a liquid, like turbid lymph. They were large and confluent, and finally broke and dried up.

Glanders is a malignant contagious and fatal disease, occurring in the horse, ass, and mule, and occasionally communicated to man. The disease spreads very readily among horses, and those persons who are in contact with them are liable to be infected. I have nothing to add to the descriptions given by the many writers on the subject, so that I need not make further reference to it, except to remind you that glanders undergoes no modification when communicated from animal to man, and back again from man to animal, such as is commonly believed to occur in the case of small-pox and cow-pox.

Anthrax is a disease affecting cattle, sheep, and horses. To these I must add swine. Toussaint in France is responsible for the doctrine that swine are insusceptible, an opinion also maintained by Klein. During the past year I have made a series of researches, which have established the fact that anthrax can be communicated to pigs, both young and old.

The disease is also communicable to man. Most frequently it results from inoculation of some lesion or abrasion of the skin. Hence it is by no means uncommon in butchers who have been dressing an animal which has died from anthrax, or in veterinary surgeons who have been making a *post-mortem*. In such cases the disease is more or less local. In one case brought to my notice a veterinary surgeon made a *post-mortem* upon the body of a bullock that had died the night previously. The spleen and parts of the viscera were forwarded to me for examination. The blood from the spleen was full of the characteristic bacilli. As I was informed that the veterinary surgeon had inoculated his finger, I wrote for particulars, and ascertained that the bullock had been found dead in a meadow near a river. After making a *post-mortem* Mr. A—— wiped the blood off his hands with some rough grass, which cut the skin on the inner side of the third finger. The hand was well washed in the river, and a strong solution of carbolic acid applied. On the following night there was a tingling

sensation in the finger, and the next day it became considerably inflamed, and a distinct pustule had formed with several smaller pustules surrounding the larger one. Mr. A—— became restless, and at times partly delirious, and if he attempted to sleep these feelings were much intensified. He also suffered from great mental depression, which continued during the attack. On the fourth day he lanced the pustules, and let out the contents. The finger was much swollen, hard, and extremely painful, and the lymphatics of the arm were inflamed. On the sixth day a medical man was called in, and caustic applied. The disease progressed, the pustule increased in size, and on the twelfth day the finger had become black, cold, and much swollen, and the pain greatly intensified. A surgeon was called in, and the finger amputated; the pain then subsided, the inflammation of the lymphatics began to disappear, and he gradually recovered.

In another well-known mode of infection the disease is general, as in woolsorters' disease, and frequently leads to fatal results. In this case the spores of the bacilli are present in wool and hair, which has been derived from animals which have died of anthrax.

I will now pass on to say a few words with regard to my second group. This comprises communicable diseases in man, which in some cases may *possibly* be derived from similar diseases in the lower animals. Such cases are illustrated by tuberculosis and actinomycosis.

Tuberculosis is extremely common in cattle and poultry, and affects also pigs, and more rarely other animals. As numbers of cattle slaughtered for the market are tubercular, and as cows with tubercular udders are occasionally found in dairies, it becomes a serious question whether tuberculosis may not in some cases arise from the consumption of meat and milk containing the virus of tuberculosis. Animals, such as pigs, rabbits, and fowls, if fed on tubercular material rapidly become infected. Is it possible that the flesh of tuberculous animals may infect man? We can only say that direct evidence of the communication by such means to man of bovine tuberculosis is at present wanting. This may be owing to the fact that as meat is cooked, the virus is destroyed. But if it is possible for this transmission to occur through uncooked material, it would naturally be expected that bovine tuberculosis would be conveyed by milk, which, as Bang has pointed out, is seldom boiled. The possibility of this source of tubercular infection has been especially brought forward of late by the researches of Bang, and following in his footsteps, by Woodhead and McFadyean. The milk of cows, with tuberculosis of the udder, contains tubercle bacilli, and such milk given, either by the mouth or subcutaneously, to other animals produces tuberculosis. Woodhead and McFadyean found, in the course of their examination of a large number of dairies and cowsheds, in one herd no less than three cows suffering from what they supposed to be tuberculosis of the udder. In order to obtain some accurate data, they made a systematic examination of some of the cow-houses in Edinburgh. On six occasions they were able to examine 623 cows, kept by thirty-seven dairy farmers. In fifteen of these dairies they found the whole of the stock healthy. Amongst the others were thirty-seven beasts, in which there were more or less marked changes in the udder, and in six cases they were able to demonstrate the presence of tubercle bacilli.

I have had the opportunity of examining two cases of udder tuberculosis, and have been able to confirm the

observation of these and other investigators with regard to the presence of tubercle bacilli in the milk. This milk, when administered with other food, produced in rabbits tubercular ulceration of the intestines and tuberculosis of the mesenteric glands. I found that in such cases the bacilli could be more readily demonstrated by collecting the milk in test-tubes, and setting them aside for a few hours. The milk is then carefully poured away, and the sediment at the bottom of the tube spread on a cover glass, and stained in the ordinary way.

In both these cases the milk had been mixed with the general supply of the dairy. There is thus ample evidence that the milk of tuberculous cows finds its way into the market, but what evidence is there of its producing tuberculosis in the human subject? If such did occur, primary tuberculosis of the intestines might well be expected to be a common affection, but such we know is not the case in the adult. This would, therefore, tend to contra-indicate danger to the adult, but on the other hand Woodhead has emphasised the probable danger to children. Woodhead has pointed out that from his experience in two large hospitals he has been much struck by the fact that in children who had succumbed to other diseases during the course of tubercular disease of the abdominal glands there was frequently not any trace of tubercular disease in other parts, thus pointing to the intestine as the channel by which the bacillus made its way into the body. Woodhead also remarks that in a large number of cases of general tuberculosis, where the possibility of infection by the pulmonary passages was evidently excluded, the tubercular process appeared to have invaded the body by the intestinal canal.

From these observations we may safely conclude that there may be danger in using the meat and milk of tuberculous animals for food, and, therefore, such meat ought to be rejected from the market, while strict inspection of dairies and boiling of milk before use will be wise, if not absolutely necessary precautions.

The next disease of which I wish to speak may be classed with tuberculosis, in that it is quite possible that it may be transmitted from the cow to man, but it must be admitted that the evidence in favour of this belief is not nearly so strong as in the case of tuberculosis.

Actinomycosis.—This is a disease of cattle which has long been reported on the continent as a common disease, but until somewhat recently in this country it was only regarded as of occasional occurrence, affecting the jaws and tongue, and, rarely, the nostrils and pharynx. My attention has been drawn to this disease for some years, but I will only briefly refer to some facts which I have experienced during the past year. In June, 1887, I had the opportunity of examining a black heifer, three years old, with a large growth in the parotid region. This tumour was discharging in places, and on firm pressure a quantity of yellowish muco-purulent matter was squeezed out, and collected in test-tubes. The case was reported to be one of several affected with the same disease. On spreading some of the discharge in a film on a slide, I observed the little grains which to the naked eye recalled the appearance of actinomycosis, and on covering with a cover-glass, and examining first with a low and then a high power, the characteristic tufts and club-shaped structures were revealed. The animal was killed, and a section through the growth revealed the characteristic naked-eye appearances of an enormous actinomycoma. But in addition there were several large tumours extending along the

trachea, one the size of an orange, and scattered through the lungs were smaller growths, varying in size from a millet seed to a walnut. Sections of the lung proved that these neoplasms were also the result of actinomycosis. This case had been sent from Norfolk, and as it was reported that there were several cases on the same farm, I obtained permission to inspect the farm and make inquiries. I found that the animals were suffering with growths in various regions—face, neck, flank, and scrotum, and that these tumours were known by the farmers as wens, stickfasts, and sorefaces. I was informed that the disease was very prevalent in the “fenland,” that the same disease had occurred on some neighbouring farms, and that it was well known to the oldest cowman on the estate. Further inquiries were set on foot, and I have been supplied with a large number of cases from this and other parts of the country, while quite recently I have been investigating two outbreaks of actinomycosis where the disease has somewhat suddenly appeared in a considerable number of animals. There is no doubt then that in this country actinomycosis is extremely common, and that it is particularly prevalent in certain low-lying districts. If then the affection is communicable to man, and bears any relation in frequency to the cases in cattle, numerous cases must have been overlooked by the pathologist, for only a few cases of a disease described as actinomycosis in man have been published in this country. The existence of such a disease in man is now well-established, and continental observers have placed nearly 100 cases on record. But out of seventy-five cases collected by Moosbrugger only ten individuals were farmers, peasants, or farm labourers, and two only were in direct contact with cattle. And in connection with this we must bear in mind that the micro-organism, associated with the disease in cattle, differs in details from the micro-organism in the disease in man. These differences are very marked, but they may possibly be accounted for as the result of the same micro-organism growing under different conditions of soil. On the other hand, in the present state of our knowledge it may be urged with equal force that though similar in some respects, we are in reality dealing with two distinct micro-parasitic affections, which occur quite independently of each other.

Lastly, I will refer to my third group, comprising a number of diseases which have been alleged to have their origin in diseases of the lower animals. The theory of the animal origin of the specific poisons of infectious fevers in man has been brought prominently forward in the alleged origin of scarlet fever from a disease of the cow, and this has been discussed with so much gravity that many have been lead to suppose that it is an entirely new idea which may revolutionise our knowledge of the pathology and preventive treatment of these diseases. I shall endeavour to show you that the theory dates back to the earliest history of medicine, and that it has been revived from time to time, only to be refuted and relegated to the domain of exploded ideas. We first hear of it in connection with the origin of small-pox.

Small-pox, we are told, was attributed by the Arabians to a disease of the camel, and this belief was regarded as an argument in favour of its origin from the lower animals, when Jenner promulgated a similar idea. But Jenner, as I have pointed out in the quotation from his work on cow-pox, substituted the horse for the camel. He considered it probable that small-pox in man arose from morbid matter of a peculiar kind, generated by horses suffering with “greasy” hocks, and thus reasons: “May not accidental circum-

stances have again and again arisen, still working new changes upon it until it has acquired the contagious and malignant form under which we now commonly see it, making its devastations among us, and from a consideration of the change which the infectious matter undergoes from producing a disease in the cow, may we not conceive that many contagious diseases now prevalent amongst us may owe their present appearance, not to a simple, but a compound origin? For example, is it difficult to imagine that measles, scarlet fever, ulcerated sore-throats, and spotted skin, all spring from the same source, assuming some variety in their forms according to the nature of their new combinations?" Baron informs us that this idea was prevalent in Jenner's mind as early as 1787. It is related that in that year he accompanied his nephew, George Jenner, into a stable to look at a horse with diseased heels, and, pointing to them, he remarked: "There is the source of small-pox. I have much to say on that subject which I hope in due time to give to the world." And again in 1794, in writing to a friend in connection with this subject, he adds: "Domestication of animals has certainly provided a prolific source of diseases among man. But I must not anticipate; you shall have a paper."

Jenner's views have not found favour. It has been shown by Loy and others that the grease bears no relation to cow-pox, and it is now generally believed that Jenner mistook a vesiculo-pustular disease, the same disease in the horse as cow-pox in the cow, for the disease known as the grease. This vesiculo-pustular disease of the horse, previously described by veterinarians under various names, is now called horse-pox. Who is there at the present day who can bring evidence to support the theory of small-pox in man arising from any disease of the horse? Indeed, the origin of small-pox from a disease of the horse was not upheld even by Jenner's pupil and nephew, Henry Jenner. The latter promulgated the idea that small-pox originated from the cow. He believed that small-pox, in fact, was cow-pox *intensified in its virulence by being passed through man*. He thus expressed himself: "Nor may it, perhaps, be too hypothetical to suppose that the cow-pox may possibly be the small-pox in its original unadulterated state before it became contaminated by passing through the impure and scrofulous habits of human constitutions." It will be observed that this theory is the reverse of the doctrine of the present day, which is that cow-pox is human small-pox *mitigated by being transferred to the teats of the cow*. However, this theory of the origin of the specific febrile diseases was not allowed to rest; another infectious fever in man was stated to have its origin in a disease of the horse.

Scarlet Fever.—Dr. Copland, in his "Medical Dictionary," states that scarlet fever in man was originally a disease of the horse, and that it formerly occurred, and has recently occurred, epidemically as an epizootic amongst horses; secondly, that it was communicated in comparatively modern times from horses to man; thirdly, that it may be, and has been, communicated to the dog. But this opinion has not been accepted, for the disease known as scarlatina in the horse is described as a non-infectious disease, generally attacking but one or two horses in a large stud. It neither spreads by contagion or infection; and Williams states that it is impossible to transmit it from the horse to any other animal, and that many cases of the so-called scarlatina of the horse are in reality identical with purpura.

And now, comparatively recently, the theory has again been revived, and finally has been adopted by Dr.

Buchanan and the Medical Department of the Local Government Board. Owing to failure in finding, in some cases of milk-scarlatina, contamination of the milk from a human source, the belief has grown that in such cases the disease may be derived from the cow; that, in other words, there is a disease, scarlet fever in the cow, which is responsible for outbreaks of scarlet fever in man.

In 1882 an epidemic of scarlatina in St. Giles and St. Pancras was investigated by Mr. Power for the Board. The disease was distributed with a milk supply from a Surrey farm. In this case two facts were ascertained, the one that a cow recently come into milk had been suffering from some ailment from the time of her parturition, of which loss of hair in patches was the most conspicuous manifestation. The other that there existed no discoverable means by which the milk could have received infective quality from the human subject.

In 1885 another outbreak of scarlet fever occurred in connection with milk from a farm at Hendon, and again Mr. Power failed to establish infection from any human source in any commonly accepted way—such, for example, as handling of milk, or milk utensils, by persons carrying scarlatina infection. But on examining the cows with a view to ascertaining any new condition pertaining to them, it came to light during the inquiry that some of them, which had recently been introduced from Derbyshire, were suffering from a vesicular disease of the teats. Dr. Cameron reported on the clinical history of the disease, which was communicable to the hands of milkers, while Dr. Klein brought forward pathological evidence to support the theory of bovine scarlatina. Dr. Klein found a streptococcus in the discharge of the ulcers on the teats, and in some of the cows he found lesions which were alleged to recall the lesions of scarlet fever. A similar streptococcus was found in certain cases of scarlet fever in man, and the microbes from either source, when inoculated *en masse*, produced similar lesions in calves. It was therefore concluded that the Hendon cow disease was scarlet fever in the cow, and that scarlet fever in man originated from the consumption of the milk of cows suffering from this disease. Now, so far as the pathological evidence goes, I have pointed out, in my papers read before the Pathological Society of London, that these data admit of an entirely different interpretation. The *post-mortem* lesions were those of septic complication, and common therefore to many diseases, and the streptococcus is a septic micro-organism occurring as a secondary result in many affections besides scarlet fever. Inasmuch as the streptococcus and the septic discharge from ulcers produce on inoculation in cows certain *post-mortem* appearances, which are common to many diseases, and failed to produce fever, ulceration of the tonsils, or scarlatinal rash, or any condition in the least resembling clinically the disease in man, the conclusion that the result was scarlatina in the cow was quite unjustifiable; and if you take the trouble to study the description of the clinical history of the disease by Dr. Cameron, and the *local* result obtained by Dr. Klein after inoculating calves with septic lymph from the cows' teats, resulting in spurious vaccination, you will fully appreciate the arguments which I have brought forward in support of the opinion held at the Hendon farm, that the disease was, in reality, cow-pox—an opinion strengthened by the complete correspondence with an outbreak of cow-pox in Wiltshire, the account of which I shall shortly publish in full. That this disease was merely coincident with the contamination of the milk is borne out by the fact that at

the same time the same cow disease was introduced from the same herd into other farms, where it was communicated in the same way to the healthy cows and to the hands of the milkers, and yet the milk supplied from these cows was freely consumed without producing any scarlet fever.

Diphtheria has also been supposed to arise from diseases of the lower animals. Dr. Cameron, after giving his account of the Hendon cow disease, says: "I am not assuming that this cow malady, under discussion, is capable of causing in the human subject any other disease than scarlet fever, but I regard it as helping to throw some light upon the natural history of diphtheria. Indeed, there may be an, as yet, undiscovered disease perhaps, without much skin eruption, and without conspicuous disease of the teats or udder, and probably also of a trivial nature, as the cow with symptoms somewhat different from those of diphtheria in man, which is capable of causing this disease in human beings through the medium of the milk from such cows. At the same time it is possible that diphtheria may be caused by some modification of this particular malady."

Dr. Turner has also suggested the origin of diphtheria in man, from certain diseases simulating diphtheria in cats, pigs, and cows. I need add nothing to these descriptions which, indeed, speak for themselves as to their purely hypothetical character, and I fear that they have been brought forward owing to a tendency to pursue fanciful theories, as a cloak to cover our ignorance on the subject of the origin of these diseases, and regardless of the damaging result of their application by a public only too ready to listen to the voice of alarmists. I have endeavoured to lay before you the dangers, real and imaginary, with regard to the transmission of some of the diseases of the lower animals to man, and to place both sides of the question before you. I would have you sift the evidence carefully before you formulate conclusions, and above all not be too ready to blame the sister profession if your conclusions are not accepted. On the contrary, when we consider that small-pox has been asserted to arise (*a*) from a disease of the camel; (*b*) from grease in the heels of the horse; (*c*) from vesicles on the cows teats: and that scarlet fever has been asserted to arise (*a*) from purpura in the horse; (*b*) after parturition in the cow; (*c*) from vesicles in the cow's teats: and that diphtheria has been supposed to arise (*a*) from garget or mammary abscess; (*b*) from a disease like cow-pox; (*c*) from a disease in the cow without conspicuous eruption; (*d*) from a disease in the cow without any conspicuous symptoms; (*e*) from diseases of cats, pigs, and cows, simulating diphtheria, I think that pathologists will rather sympathise with any apathy that may be displayed by the veterinary profession in listening to the opinion of the theorists of our own.

Special Articles.

SCOTLAND.

THE London Correspondent of the *Glasgow Herald*, under date August 24th, says: "I understand that the debates on the unfinished stages of the Scottish Universities Bill at the autumn sitting of Parliament are likely to be increased in liveliness by the fact that a number of English members, who are interested in various points in it—more particularly the subject of theological tests—are being com-

municated with by their Scotch friends, who wish to secure their assistance." Those who know anything of the differences of Scottish dissent and English may be surprised to hear of this new alliance, as well as anxious to know why at this late date the question of theological tests should be made a critical one. English Nonconformists, and that important body of all who, though not adherents of the Church, are separated from it by differences other than such as are purely theological, should beware of being made the cat's-paw of what may be described as medical dissent. Those who are really interested in the condition of medical education in Scotland are aware that its advancement requires that before any new erections of colleges are made the claims of all teaching bodies shall be fairly investigated.

The St. Mungo's College Bill, now defunct, was an attempt to anticipate the deliverances of the Commission, proposing, as it did, to grant a charter to the Glasgow Royal Infirmary, without regard to the interests either of the universities, the corporations, or the other teaching schools. The disappointment among its supporters must not be allowed to upset the most serious and promising of all the efforts that have been made during the last ten years to put the ordinances and privileges of the licensing and teaching institutions upon an equitable footing, and to increase their efficiency.

DUNDEE MEDICAL SCHOOL.—APPOINTMENT OF PROFESSOR OF ANATOMY.—At a meeting of the council of University College, Dundee, held on September 12th, Andrew Melville Paterson, M.D., C.M., M.R.C.S., lecturer in the Victoria University, senior demonstrator of anatomy and lecturer on dental anatomy and physiology in Owens College, Manchester, was appointed to the Thomas H. Cox Chair of Anatomy in University College, at a salary of £350 a year, with two-thirds of the fees of his class. Dr. Paterson graduated as M.B. and C.M. at Edinburgh University in 1883 with first-class honours, and won a gold medal at that University for his thesis on proceeding for his M.D. degree in 1886. The Medical School in Dundee now contains established and endowed chairs of chemistry, natural history, botany, and anatomy, and only chairs of physiology, pathology, and surgery—the last being optional—are required to complete the first two years' course. Mr. Patrick Geddes, F.R.S.E., has been appointed to the James F. White Chair of Botany.—*Glasgow Herald*, September 13th, 1888.

It may be presumed that the Commission will be empowered to recognise University College, Dundee, as a medical school as soon as it shall produce evidence of adequate endowment in the necessary subjects. The establishment of a chair in physiology would practically dispose of any remaining hope that St. Andrew's might have exclusive charge of providing the first two years of the curriculum. How far the medical endowments of St. Andrew's may be made available is an important question alike for the new Medical School, and in the interests of the Arts Faculty of St. Andrew's. At the same time, the promoters of the Dundee School must be reminded that the funds, even for a physiology chair, have not been forthcoming so readily as was hoped, and that without other endowments in pathology, and in the more practical subjects, the school could not expect to attain to that degree of efficiency which would enable it to compete with the other Universities of Scotland. Admitting the fact of over-crowding in University Classes in Edinburgh and Glasgow, it remains to be seen whether the high-tide mark here has not already been reached. As regards Glasgow, much will be effected when the managers of the Royal Infirmary abate something of their demands, and come to an understanding with the University. But as regards the whole body of the English students in Scotland,

it may fairly be expected that they will be influenced to a not inconsiderable extent by the issue of the agitation at present on foot for the obtaining of degree granting powers by the London Hospitals in conjunction with the Royal Colleges of Physicians and Surgeons. In view of a possible combination by these bodies for degree granting

purposes, with improvement in the teaching organisation, with, in fact, some central organisation of teaching in the metropolis which does not yet exist, it behoves the promoters of any new school to remember that it has its reputation to make, that in order to have any claim upon the rising medical youth it must start fully, and even elaborately, equipped.

HEALTH RESORTS OF THE WORLD.

XXIII.—WEMYSS BAY AND ITS NEIGHBOURHOOD.

WE published in the *Provincial Medical Journal*, 1887, pp. 354, 406, 455, an account of a few of the Scottish health resorts. We intend to continue the series, so as to include the chief sanatoria of the country. The Glasgow meeting of the British Medical Association enabled us to become acquainted with Wemyss Bay and its neighbourhood, and taking it as the point of departure for Rothesay and the Kyles of Bute, Arran, and the islands of the Clyde, we shall describe it. Wemyss Bay deserves what it has obtained—a widespread reputation as a marine resort. Its sanatorium, the Hydropathic Establishment, Skelmorlie Heights, is one of the most popular and most frequented in Scotland.

The Glasgow train from Bridge-street station, running close by the Clyde, takes the traveller by what is in a great part a beautiful route. Passing Paisley and Greenock, the scenery becomes more and more charming, and when Wemyss Bay is reached the view is magnificent. The range of Scottish hills, well wooded, and dotted with houses running up from the water's edge, the vast expanse of water divided at parts by islands, the gradual toning away of the horizon of the hills, the well-manned vessels plying to and fro, the trim yachts in sail or at rest, all contribute to heighten first impressions—and first impressions count for something. The panorama on a fine day, or even in a Scotch mist, the variety of scenery, and the blending of land and water, are simply charming. Upper Skelmorlie, to which we were bound, rises to a height of some 800 feet, forming at the top a wide plateau; and when we reached the top we were enabled to better appreciate the magnificent panorama spread before us. Standing in Ayrshire, we have Argyshire across the Clyde, on the right Renfrewshire, on the left Buthshire. Far away in the distance are the hills of Dumbarton. Though close to the sea, vegetation is rich, the trees are lofty and in full foliage, the grass luxuriant, and the flowers in bloom in the open air—all testifying to the mildness and purity of the air, and pointing out Wemyss Bay as a suitable winter, as well as a summer and spring resort.

Wemyss Bay is to all intents a land-locked salt lake, so that we have all the benefits of sea air, whilst we are screened from the rougher breezes and winds which try an invalid.

We move along the road on the plateau, on each side of which are charming residences built of red sandstone, and soon reach the hydropathic establishment. The accompanying illustration will give a better idea of its position than any amount of verbal description. It overlooks the Clyde, and whilst at so great a height, it is sheltered from land breezes by trees which grow plentifully and luxuriantly round it. Built of the sandstone of the district, it looks bright and warm. The road to the establishment winds up the heights by a long carriage drive, so that invalids need not fear the ascent or descent. A description of one hydropathic establishment is a description of another. We need only say that at the Skelmorlie hydropathic establishment we have everything that can add to the visitors's comfort—an excellent salon, reading-rooms, and what perhaps is of as much



Skelmorlie Hydropathic Establishment.

importance, the *cuisine* is well attended to. Hydropathic fare at all such establishments a few years back was generally stereotyped, *mais nous avons changé tout cela*. A variety of diet is necessary to the invalid, and to those who are in search of health. It is still more required by those who are in excellent health, but only require rest and change. The manager, Mrs. Hockley, who is well acquainted with such institutions, looks well after the interest and comforts of the visitors. The baths are supplied with sea-water,

pumped up; and there is every variety, from the cold douche to the Turkish. We were informed that these baths had been in use some time, and were about to be re-modelled and enlarged. There are spacious grounds round the house, and ample amusements in the shape of tennis, billiards, etc. The medical superintendent, Dr. Currie, though he does not live at the establishment, has a consulting room, and is to be seen daily, and gives advice to those who may require it. His house is about a stone's throw from the establishment, where he carries on his private practice. We consider that Wemyss Bay has one great advantage, its close proximity to the sea and the river boats. The *Ivanhoe*, the *Victoria*, etc., call daily at the pier; and the *Columbia*, *Lord of the Isles*, *Iona*, etc., can be joined at Rothesay; and as these boats are fitted up most luxuriantly, short and long trips can be taken in them, so that all the advantages of sea-air are obtained with a small amount of expenditure in money or in force. Those who like short sails can run over to Rothesay, Millport, or Largs. Those who delight in longer tours on the water

can sail through the Kyles of Bute, or go to Arran, or Ardsrossan. Those who are more venturesome still can sail to Iona, etc. Most of these sails can be taken between the hours of breakfast and dinner. Delicate children, for whom sea-air is necessary, can spend certain periods of each day in sea-air without any fatigue, and the same holds true for other invalids, and persons advanced in life.

A better idea of the position of Wemyss Bay will be gained by consulting the map of this part of the country that we published in the *Provincial Medical Journal* for October, 1887, p. 456, on the estuary of the Clyde, from which it will be seen that Wemyss Bay, owing to its position, affords an admirable base or resting place from which excursions of all kinds may be planned. We would again emphasize the value of the shores of the Firth of Clyde as a spring and winter resort, as this locality is easy of access from the north of England. Its advantages should be widely known. The climate is equable through the year, and as we have pointed out, its flora is the best test of mildness—flowering early and blooming late.

Reviews.

A Practical Treatise on Diseases of the Skin. By JOHN V. SHOEMAKER, A.M., M.D., etc., with coloured plates and other illustrations. New York: D. Appleton & Co. 1888.

DR. SHOEMAKER'S work comes to us with some strong recommendations from representative American journals, as the *New York Medical Record*, and the *New York Medical Journal*, and we do not wonder at the reception it has received from the medical press of America. As a teacher in the Jeaffreson Medical College, and more recently as a Professor in the Medico-Chirurgical College of Philadelphia, Dr. Shoemaker acquired a knowledge of the wants of the student, and able to draw on a rich experience, he has produced a practical manual, which will stand in good stead, not only the student, but the general practitioner. Skin diseases, as usually treated of in many of our manuals, are made more difficult in the matter of diagnosis and treatment; simplicity is too often sacrificed to supposed profundity, and in place of being helped, "confusion is rendered worse confounded." To write a book from the standpoint of the specialist, and which shall be understood by the specialist only, is one thing, but to write a book which shall be understood by the masses is another thing. The specialist for the latter purpose has to come down from his own position, and to ask himself a number of questions: "How can I give information to men who are not specialists, but who are only students, in the clearest way? How can I make intelligible the diagnosis of a number of diseases, many of which closely resemble each other? How can I popularise the diagnosis and treatment of skin diseases?" Dr. Shoemaker has answered these questions by writing for the audience he wishes to address and impress, in clear and simple language, avoiding as far as possible technicalities, making old words do service, never using a word of three syllables when a word of two would do. He has preserved, all the same, the scientific aspects of his subject; and by his manifold quotations and references to the current medical literature of other countries, he stimulates the appetite of his readers, pointing out where fresh pabulum can be had. The voluminous size of the work is easily accounted for by

the rapidly extending literature, and the increase of knowledge as to the nature and variety of skin diseases; condensation has been pushed as far as possible. The orthodox method has been partly adopted. We have first an account of the anatomy and physiology of the skin; this is of course the first requirement—viz., to know what the skin is in health, and next, what are its functions? This is followed by an account of the pathology and etiology of skin diseases. Treatment, on general lines, is fully considered, and there is some excellent advice on the hygiene of the skin. Shoemaker's name is very much associated with the oleates, and here we may quote his own words:—"I do not, and never did, claim, as has been unjustly charged by some uninformed writers, that the oleates were original with me; an examination of the various papers I have written clearly show that I make no such pretensions. I do, however, claim that my physiological and therapeutical investigations are original." The oleates are now firmly established as valuable remedies, and are used extensively in England and America. In the classification Hebra's system is mainly adopted, as it is the most commonly accepted system, and the simplest. In describing the various diseases of the skin, Dr. Shoemaker gives the common name, as well as synonyms, and his descriptions are exceedingly graphic. At the present day, when there is a tendency to underrate the value of remedies in nearly all diseases, Dr. Shoemaker's faith stands out clear and emphatic. He is not willing to adopt a *laissez faire* policy, and his *repertoire* of remedies are numerous; more numerous in those cases which are rebellious to treatment. The changes have to be rung in skin disease treatment. We cannot lay down a stereotyped formula for each variety; the remedy, which has done in one case, will not do good in another. Wilson had one very valuable formula, and this prescription has been passed round in family circles for all kinds of skin complaints, failure naturally resulting. Eczema frequently is a name for ignorance of skin disease. Eczema presents us with many varieties, and consequently we have a number of remedies which have to be tried before the most effectual one is found out. Dr. Shoemaker gives us an *embarras de richesses* in the way of remedies. The practitioner will select from his list, and will soon find out which of them are most to be relied on. The student we presume to be intelligent, and will not run from one prescription to another, without thought or giving due time to each remedy. Our author, not content with his own experience and his own prescriptions, gives us remedies which have been tried by other dermatologists. Had he been less modest, or more astute, he would entirely have ignored the labour or practice of others. This is a fault which we certainly condone. The book is not written to exalt Dr. Shoemaker's own practice, but to present a fair view of the best practice of the present day. We need not run through the diseases described in detail. It is sufficient to say that the account of all the special forms of skin disease is sufficiently given, and that the general practitioner who wants a reference book could not purchase a better one. We are able to speak favourably of Dr. Shoemaker's own work, but we regret we cannot commend the artistic part of the volume. The smaller drawings are fairly done and accurate, but the coloured illustrations, in the present state of lithography, are quite unworthy of a place in this book, and we hope that when a second edition is produced the coloured illustrations will be replaced by drawings better executed, and more true to nature.

Transactions of the Academy of Medicine in Ireland, Vol. V.

Edited by WILLIAM THOMPSON, M.A., F.R.C.S.I. Dublin:
Fannin & Co. 1887.

THE present volume is fully up to the reputation of its predecessors, and contains many articles of importance and interest. Dr. Foot records a case of that curious affection described by Gélinau under the name of "Narcolepsy." He suggests "hypnolepsy" as a more expressive term. The disease is shown to be distinct from epilepsy, the *maladie du sommeil* of the tropics, and from hysteria, and is probably a distinct neurosis. No treatment seemed to have any effect.—Dr. Nixon in describing a case of "Myxœdema," suggests that the disease may be fairly named "Ord's disease." In commenting how far the labours of the physiologist and the physician go towards limiting or preventing operative procedures, he says: "It is scarcely conceivable in the present state of our knowledge regarding the relation of myxœdema to loss of function of the thyroid gland, that removal of this organ in its entirety should be undertaken."—Dr. Mouillot, in detailing an outbreak of diphtheria in a workhouse school, shows that the disease can be caused by foul drains *de novo*, and can so simulate ordinary tonsillitis as to render diagnosis impossible in the absence of history as to opportunities of contagion.—In recording a successful case of "Nephrolithotomy," Mr. Kendall Franks shows that the classic symptoms of stone in the kidney cannot be relied on, and that none are constant except the pain and the tenderness on pressure.—Mr. M'Ardle discusses "Pylorus Resection," and expresses his belief that the operation will yet rank as one of the greatest surgical triumphs of this or of any other age.—Mr. Barton contributes a successful case of "Œsophagotomy" to remove a foreign body. In his opinion the difficulty of after-feeding is best met by introduction of suitable food twice a day by catheter or rubber-tube *through the wound*, as the passage by the mouth caused irritation of the pharynx.

"Secondary Suture of Nerve" is ably discussed by Mr. J. H. Scott. We read that "transplantation of part of a nerve is an operation based on an erroneous pathology, as it interposes between the cut ends, a tissue which, at best, is certain to degenerate into a fibrous cord, and thus opposes an obstacle to the growth of the central end." The present weight of evidence seems to decide that the peripheral segment of a divided nerve degenerates *in toto*, and that regeneration proceeds only from the central end. The author's experience on the ulnar and median nerves is that the direct is the safest suture, as the perineurium has not sufficient resistance to keep the ends together in cases where there is any amount of strain on the point of union.—One of the most interesting communications is that of Mr. Stoker on "Excision of the Knee-Joint." His experience leads him to the following conclusions: That the results of the operation have been too favourably stated; that age has been over-estimated as an influence for good or evil; that it is not correct to teach that removal of an entire epiphysis from a young bone of necessity involves a short limb. Mr. Stoker agrees with Professor Humphry that prolonged scrofulous suppuration is the most common cause of failure in this operation. He divides the flap in the middle line as high as the synovial pouch extends, and makes a careful dissection of the synovial membrane. This is a tedious and troublesome proceeding, and the operation often lasts from one and a half to two hours. In order to

keep on the initial dressing as long as possible, great care is taken to stop all oozing. The use of Esmarch's bandage has been relinquished, as has also that of plaister of Paris as a means of applying the splints. P. H. Watson's splint, as modified by Thomson, is used. Mr. Stoker then describes his method of securing the bones together, which, though resembling Morrant Baker's method, is quite an independent idea. The tibia is punctured on each side of the tubercle, and a steel awl introduced upwards, backwards, and outwards. A dowel of silver wire, a shade larger than the diameter of the awl, having its end filed to a chisel-shaped edge, is then pushed into each perforation, and into the opposed cut surface of the femur. The dowels cause no irritation, and are usually removed two or three weeks after the operation.—In an article on "Excision of the Wrist" Mr. Wheeler makes an exception to his usual custom of deprecating the use of Esmarch's bandage. Lister's lines of incision slightly modified are preferred.—Dr. Fleming concludes an able article on "Placenta Prævia," by describing the routine practice at the Rotunda Hospital. If rupturing the membranes is not sufficient, "turning" is performed, and the lower extremities are left projecting through the cervix as a plug till the cervix is fully dilated.—Mr. Fitzgibbin records a cure after trephining the mastoid process for aphasia, paralysis, etc.—The pathological section contains many interesting communications, some of them capitalily illustrated. CHARLES ATKIN, F.R.C.S.

Practical Treatise on Antisepticism as applied to Therapeutics and Hygiene. By Dr. PAUL LE GENDRE. Volume I.

WORKS on antisepticism are now so numerous, and therapeutic modifications are so extensive, that it is very difficult for those who have not time to read everything—and they form the great majority of readers—to become thoroughly acquainted with the subject. Whilst it is desirable to know everything, it is practically impossible to read everything. A want has been felt that some one who had acquired an accurate knowledge of antiseptic methods, and capable of rightly estimating the value of the various published works, and therefore well versed in theory as in practice, should take the trouble to collect, to classify, and to draw conclusions from the vast mass of documents relating to the subject. The task was not a light one, and no one was better qualified to undertake it than Dr. Le Gendre, a former pupil of Professor Bouchard, and an editor imbued with the teachings of this master. Not only has the author gathered together, analysed, and criticised all the most important works on this therapeutic method, but he has treated his subject in such a manner that a perusal is not only easy and instructive, but even agreeable. He has not been content to simply enumerate and transcribe from the various treatises on antisepticism, but forms his own conclusions, often original, and induces the reader to familiarise himself with all the latest doctrines. Dr. Le Gendre is to be congratulated on the success which has crowned his efforts. The treatise commences by a preliminary account of microbes, and of the important part they play in the production of diseases; he then lays down the general principles which should govern all experiments in the study of the comparative value of antiseptics. The second portion is reserved for the enumeration of all bodies to which antiseptic properties have—with more or less reason—been assigned. In each case the author has

described the physical and chemical characteristics; has noted the degree of solubility, and the doses in which they may safely be employed. He has formed a true antiseptic arsenal. In a series of chapters the author examines the various appliances in use, and the diseases which are amenable to therapeutic treatment. The work is to be completed by a second volume, which will shortly appear, dealing with surgical and obstetric antisepticism, which subjects will be treated by Drs. Barette and Le Page. When medical men have read the treatise of Dr. Le Gendre (the only book of its kind to be found at present) they will wish to reperuse it, and when they have become convinced of the necessity of the antiseptic method in treating their patients, they will find numerous formulæ which will enable them to apply in a better manner many of the agents with which they are already acquainted, and others which they perhaps scarcely know by name.

H. H.

Short Notices.

Notes on Surgery, for Nurses. By JOSEPH BELL, M.D., F.R.C.S. Edin. Second edition.

It is probable that these lectures have lost something in being committed to print; the more highly clinical character, which no doubt originally belonged to them, has disappeared, leaving a quasi systematic treatment of the subject, which is obviously inadequate. The injunctions as to thoroughness, careful obedience, and others of a general character, are excellent. Some of the descriptions, of the conditions of pyæmia, injuries from burns, of how a nurse may assist at emergency operations, such as tracheotomy, are very admirable. There are many things that go to the making of a good nurse. We will suppose that she is kindly and honest, strong, and intelligent. She will want lectures on anatomy and physiology, on dietetics and cooking; for the rest she will learn most in the wards, at the visit, at operations, and when helping her senior nurse. There is room for lectures on nursing, both medical and surgical; with books like Florence Nightingale's, Catherine Jane Wood's, and Esmarch's "Ambulance Lectures" (translated by H.R.H. Princess Christian), the nurse's library may be considered tolerably complete.

H. R.

Engravers and Engraving, being the Inaugural Address delivered to the Birkenhead Literary and Scientific Society, Session XXXI., 1887-1888. By FRANCIS VACHER. Manchester: George Falkner & Co.

DR. VACHER (Birkenhead) is well known as one of our leading authorities on questions of public health. In this brochure he establishes a claim to a position in the art world, as a connoisseur of engraving in all its branches. As President of the Birkenhead Literary and Scientific Society Dr. Vacher took the opportunity of an exhibition of prints, to explain to the members how prints are produced, and to educate them so that they might be able to appreciate the engraver's work. The address is evidently the work of one

who is a lover of this art, and who is well acquainted with all the methods employed by masters past and present to produce their beautiful effects. The style in which this brochure has been produced is worthy of the subject. It is printed on hand-made paper in old English type, with vellum cover, so dear to all lovers of books, and those are fortunate who have obtained copies. The issue of the address was not for the public, but for the private members of the Birkenhead Society, of which Dr. Vacher is president.

The Brontë Country: its Topography, Antiquities, and History.

By J. A. ERSKINE STUART, L.R.C.S. Edin. London: Longmans, Green & Co.

LIVING in the country of the Brontës, Erskine Stuart has caught the enthusiasm which exists in the districts for this gifted family. We have a large literature already on the Brontës, but we could not miss a single work, and we are glad to welcome another, especially when it is so originally conceived, and so well carried out. Mr. Stuart, in this volume, has collected together a large amount of information and stories about the Brontës, which are not to be found in any other book. He tells us of the places where they lived, and showed how their lives were influenced by their surroundings, so that in their works there is all through a breath of reality in their descriptions, whether of places or of scenery. Erskine Stuart's work should be read by all who really appreciate the novels of the famous sisters. The work is beautifully got up, and published at a moderate price.

A Practical Manual of Venereal Diseases, including Disorders of Generation, Spermatorrhœa, Prostatorrhœa, Impotence, and Sterility in both Sexes. By M. K. HARGREAVES, M.D. London: R. Kimpton, 126, Wardour-street.

IN this work Dr. Hargreaves has treated a number of subjects which have been allowed, partly through our sense of delicacy and partly through our not attaching much importance to them, to fall into the hands of quacks. The sexual diseases as impotence, sterility, spermatorrhœa, are the fruitful source of much misery. We want to understand these conditions better, and we agree with the author when he states, "The importance of a rational and scientific basis for the treatment of those common, but painful and often most intractable maladies, cannot be over-estimated." This manual will be useful to the student and practitioner, as it condenses a vast amount of information into a small number of pages.

State Organisation of Hospital Management. By J. BRINDLEY JAMES, M.R.C.S. Eng. London: John Ball & Sons.

WE trust that this pamphlet will be widely circulated and read. It gives an excellent account of the French system of hospital management. The amount of money spent in London, or rather wasted, owing to our system of separate institutions, and multiplicity of staffs, is simply enormous. Ventilation by pamphlets, and by discussion are the ways to remedy the abuses. This pamphlet is well written, and Mr. James' views are clearly expressed.

The Provincial Medical Journal,

OCTOBER, 1888.

WE are again reminded of the inexorable march of time by the announcements of the opening of the schools. This, the month of October, is the season of introductory lectures, when an opportunity is taken of welcoming the young students, and of giving them some good advice for their future guidance. The introductory lecture was well conceived. The first entry into medicine is an important step, and advice is needed. A youth is thrown at an impressionable age into a vast city like London, and into new conditions, and very much depends upon the first impressions made upon him, and on the set he takes up with in his school. It cannot be denied that of late years there is a greater personal interest taken in the students by their teachers, and that there is more personal supervision. Attendance at lectures is now compulsory; class rolls are called over; and the student who does not work is looked upon at our best schools as a discredit to his school. There is more general culture amongst the students, and rowdiness has disappeared. Fortunate is the student who has selected a good school, and who obtains the assistance and friendship of his teachers. The choice of a school is a very important one for parents. In London it is easy to make a selection, for all the schools, we believe, are well managed, though some have a greater prestige, derived from age, size of hospital, etc., and the renown of the teaching staff. A small school has advantages, especially for students who are plodding, and who are not what we should call bright; at the crowded schools, the more highly endowed, come to the front, and push the weaker on one side. Ambitious young men will seek the larger schools, because there are more scholarships and prizes—prizes not only in gold medals and books, but in the shape of prizes in the future, of house surgeonships, house physicianships, and ultimately a position on the staff of the hospital. It is well to enter with ambitious views, even though disillusion may afterwards come. Medicine is a good profession. It does not offer such prizes as the Bar, but it offers a chance of a living to all, which the Bar does not. There are more briefless barristers than penniless doctors, and the general income of the profession is better than the income of the Bar. In the various introductory lectures the praises of the profession will be sung in different keys, so that we need not say very much about it.

A few words we may say. The student enters into the profession of Medicine in the hope of making it a good means of livelihood. He has had presumedly a good liberal education, which means the investment of a large sum of money, and he should have some return for this in after life. We all remember the advice given by TENNYSON in the "Northern Farmer." The old man told his son not to marry for money, but to go where money was. So the student, when qualified, must not practise his profession for the sake of money, but he will be none the worse for exacting

the fees to which he is entitled when he has done good and faithful service. He must always be kind to the poor, but he must distinguish between the poor and the impostor. It is too much the fashion to give gratuitous advice; this lowers the recipient as well as the giver. Medical charity is too often the first prelude to permanent pauperism. The duty of the medical man does not lie to all humanity: he owes a duty to himself. He must take his share in relieving the distresses of mankind; but he must only do his share, and not accept the whole responsibility. Kindness to the poor will always be associated with our practice; the service we render them must not be rendered ungrudgingly. This must begin at the hospital, and it will never be lost in after-life. One word more. All work and no play is bad for boy and man. The student should cultivate a hobby, in art, literature, etc. When at work, he should work; at play, play. The secret of all success lies in this.

DURING late years the clinical observer has been forced to take a back seat. He has been pushed on one side by the men who were supposed to be engaged purely in original research, as if the clinical observer were not equally entitled to claim that he was engaged in original research. This name has been appropriated by those who worked in laboratories, and who looked through microscopes, or who applied complicated instruments to curarized frogs to measure their heart beats, or who took up the more fashionable pursuit of bacteriology. As a consequence of the fashion, we have a vast literature, but unfortunately not valuable in proportion to its vastness. We have a mass of ill-digested, crude material, produced in accordance with the wants of the market. Theories have been started, based on imperfect experiment, and these have been in turn superseded by newer theories, and equally imperfect experiments. Original research, being encouraged by endowments, and by the fashion of the day, naturally has thriven. In the jargon of the day original research was to be the key-stone to unlock all the secrets of medicine, and we have had vivid pictures painted for us by world-renowned medical men on the future triumphs of medicine. But all this was to happen in the good time coming. We need hardly remind our readers of the *furor* that was created in favour of the application of chemistry to medicine; chemistry was to be the "Open Sesame!" We had only to analyse the various parts of the body, to find out the various constituents of bile, urine, etc., and then, knowing the component parts in health and in disease, by means of physiological chemistry we should be able to build up new tissue. Physiological chemistry had its uses, and has been of benefit to medicine, but that it did not fulfil the expectations raised for it is proved by the establishment in our own days of the new system, working on new lines. The clinical observer has been very patient—just as he was patient when he was threatened by displacement by the chemist—and perhaps for this reason, that he could afford to wait, as he knew that his time would come

again. If we read the history of medicine we shall find that the greatest advances have been made by clinical research, and by the observation of facts interpreted by great minds. The mistake we now make is that in place of making bacteriology the handmaiden of clinical observation, we wish to put it in the position of master. The chemist and bacteriologist can do us good service, but they must be kept in the place of servants. Laboratory experiments on dead tissue, or on living matter out of place, cannot alone solve for us the problems of life or the problems of disease. We must accept with gratitude the discovery of the comma bacillus and the bacillus tuberculosis, but we must not deceive ourselves into the belief that because we have discovered these organisms we thereby know all about cholera and consumption. Hundreds of papers have been written from the standpoint of original research; the writers have covered themselves with honour; is there one less death from cholera, or consumption now that can fairly be attributed to these discoveries? Have we any treatment, that is satisfactory, based on these discoveries?

There can be only one answer to these questions. It may be asked, What do we mean by clinical observation? We answer by referring to GRAVES' clinical lectures; that is the kind of thing we want, aided by the light of modern thought. If GRAVES lived now-a-days he would be considered hardly fit to address a London society, because, forsooth, he was not "an original researcher." We are dominated by shibboleths, and there is no greater one than that represented by the above words. Clinical observers may take heart; we see some signs of the lifting of the veil. Professor LE FORT, when he exposed some open wounds to the pure air of his hospital wards struck a blow at one laboratory-formed delusion. Professor LAWSON TAIT, when he washed out a peritoneum with water teeming with microbes, struck a blow at the same delusion. Here clinical observation (backed up by common sense) vindicated its claim to a hearing, and strengthened the hands of those who wished to deliver medicine from a reign of terror, formed by coteries who, in the name of science, anathematized all those who ventured to doubt. "You are unscientific," said the orthodox; "You are ignorant of the methods of modern research, and still more, as you question authority, you must be put out of the field." This kind of language has silenced many, because, in medicine as in the Churches, martyrdom is not so eagerly sought after, and social ostracism from the *best* professional circles (which really means a small coterie) would be martyrdom to some. The man who dares to run counter to a popular fashion in medicine must be a man with backbone. As soon as a fashion is dying out we find that we have a large number of vertebrates who are willing to give it a parting kick, and we shall soon have a large number of this class anxious to have a kick at the fashion which has dominated surgery. The experimental method has been of the highest value to medicine, and will always be of value, but it is only one method, and can only play a limited part in the solution of the

problems of disease. It is not *the* method of medicine. In the emancipation of our minds from this delusion we shall make a new departure, and help to restore the study of medicine to some of those conditions which, in the hands of the old leaders and writers, was so fertile in results, especially in the matter of treatment.

IN the *Bulletin General de Therapeutique*, 30th July, 1888, Dr. L. H. PETIT has an excellent article on the treatment of hæmorrhage by revulsion over the hepatic region, and it may not be without profit to our readers to present an abstract of it, more particularly as the same view has been ably promulgated in Ireland by a distinguished Belfast physician. The *role* of maladies of the liver in the pathogenesis of hæmorrhages is universally admitted, owing to the memoirs of MONORET, in 1853, on spontaneous hæmorrhage, and M. VERNEUIL, in 1870 and 1875, on traumatic hæmorrhage. M. VERNEUIL, in certain rebellious hæmorrhages, suggested recourse to revulsion over the hepatic region—viz., to treat affections of the liver as a primary cause. The most common spontaneous hæmorrhages appear to be hæmorrhoidal flux and epistaxis. In 1875 M. DURET published, in the *Progrès Medical*, a clinique of M. VERNEUIL, relating to three cases in which the relation between the affection of the liver and the hæmorrhoidal flux was apparent. In two cases M. VERNEUIL directed revulsion to the region of the liver by means of cold douches; not only was the loss of blood stopped, but at the end of some months the hepatic affection and the hæmorrhoidal flux disappeared. In 1885, at the Congress of Rheims, M. VERNEUIL communicated an observation in the name of his *élève*, M. GARNIER, on a case of rebellious epistaxis, cured by the application of a blister over the hepatic region. In 1887 M. VERNEUIL reported other observations of the same kind, whilst Dr. ALEXANDER HARKIN published in the *Lancet* (October 3rd, 1886) some analogous cases. Dr. PETIT narrates three cases of hæmorrhoids associated with diseases of the liver cured by the cold douche, and then he proceeds to consider the *rationale* of this treatment. "The action of the cold hepatic douche," says M. PETIT, "in the affection of the liver and hæmorrhoids, was most remarkable. In one patient who had voluminous hæmorrhoids, and an enormous liver, hydrotherapy was carried out with tonic treatment, and though it took some time—four years—the hæmorrhoids were completely cured."

M. VERNEUIL asks, "Does the douche diminish the hypertrophy of the liver, or did the tonic treatment render the blood more plastic?" These questions cannot be definitely answered, but the observations prove that it is not necessary to operate on all hæmorrhoids. M. VERNEUIL has almost abandoned operative intervention, trusting exclusively to dilatation with interstitial cauterization, with the thermo cautery, when the piles are voluminous and very vascular. He then applies compresses steeped in phenic water, the patient taking rest for a short time. Dr. PETIT next alludes to the

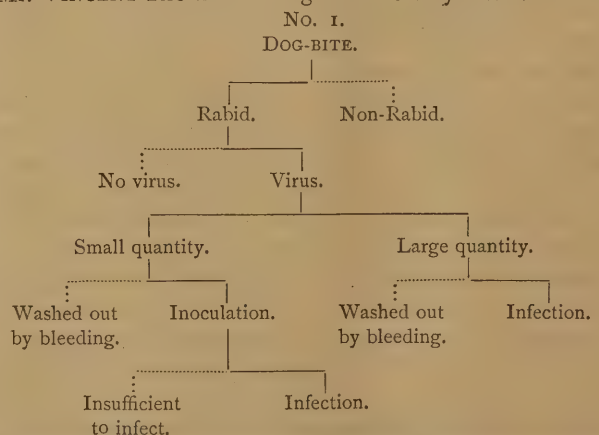
observations of Dr. ALEXANDER HARKIN, and to his paper on "vicarious bleeding from the upper lip, and remarks on the modern treatment of hæmorrhoids," published in the *Lancet*, October 1st, 1886 (vol. ii., p. 813). He makes lengthy quotations from this paper. Dr. HARKIN's views have been more recently published in a paper read at a meeting of the British Association, Dublin, in 1887, "On the Nature and Treatment of Epistaxis." Epistaxis, according to Dr. HARKIN, may be attributed to functional, and often to structural disease of the liver.

"Hæmorrhagic diathesis is in my mind a dyscrasia, a secondary affection, chiefly due to chronic hepatic derangement. The theory of the hepatic origin of epistaxis will not, perhaps, appear unreasonable if we consider for a moment the rôle of the liver in the constitution and distribution of the blood, its metabolic activity, as in the formation of glycogen in the hepatic cells, its double supply of blood through the hepatic artery and portal vein, its power of transforming hæmoglobin into bile pigment, and of elaborating the raw material so that it may be assimilated when it enters the general volume of the blood, as the product of cellular metamorphosis. Now, the proportion of the vital fluid continually flowing through the liver is fully one-fourth of the whole blood careering through the body; and further, as the result of heterogenesis we owe the existence of the lithic acid, and the glycosuric dyscrasia, it is not unreasonable to attribute to the same cause the establishment of the deteriorated, depraved, and hypinotic blood of the anæmic subject of epistaxis. According to Michael Foster (1) 'Since in the heart and great blood vessels the blood is simply *in transitu* without undergoing any great changes, it follows that the changes which take place in passing through the liver and skeletal muscles far exceed those which take place in the rest of the body.' And Aitken (2) 'Numerous instances of the hæmorrhagic diathesis have pointed to a definite organ as its source—namely, either a morbid condition of the spleen or the liver, and in case of *leukemia*, usually toward the close of life, a genuine hæmorrhagic diathesis is developed.' Immerman, writing on the general diseases of nutrition, says:—'If a disorder of nutrition, looked at broadly, depends upon a disturbance of the mutual relations between the blood and the tissues, it necessarily follows that it may originate either in an abnormal state of the blood or the tissues. Hence the pathogeny of the general disorders of nutrition suggests the possibility of their arising in different ways, and regards any one-sided theory, *e.g.*, that they are a blood disease, as *à priori* unjustifiable. For, since the blood, besides supplying the tissues with pabulum, also receives from them the products of cellular metamorphosis, it is always possible that, owing to a morbid state of all or a majority of the tissues, a secondary heterometry or dyscrasy of the blood may be induced, as in diabetes mellitus.' Further, 'The anæmic condition may possibly depend on a state of the tissue elements in which the desire for pabulum is relatively good, when accompanied with an inadequate energy of sanguification; the hyperæmic state on a weak, acquisitive power in the tissues, while the power of renewal of the constituents of the blood is unimpaired.' My contention is that the starting point of the constitutional disorder which takes the form of anæmia or hyperæmia, and of which epistaxis is the frequent outcome, is as clearly due to hepatic disorder as diabetes mellitus itself—that is to say, to an abnormal condition of the tissue elements or cells in the liver, secondarily affecting the blood, and, through it, the general constitution."

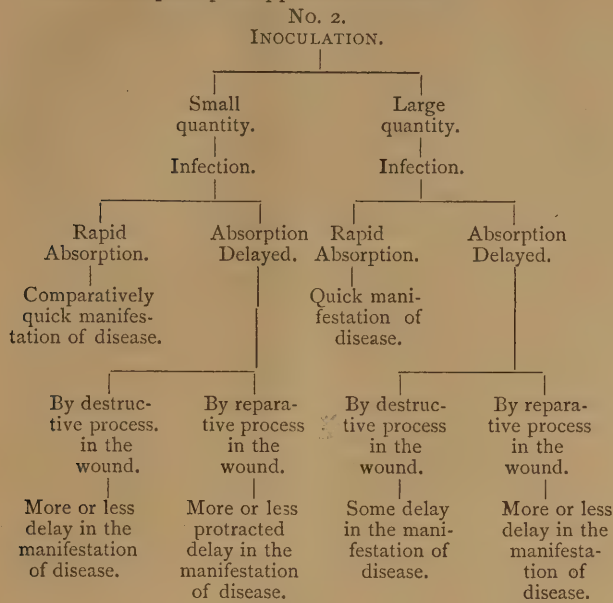
We need not further allude to the first part of Dr. PETIT's paper on hæmorrhoids, the observations on which so closely coincide with Dr. HARKIN's. The explanation of the pathogenesis is so clearly given by Dr. PETIT that we may now regard their cases as valuable acquisitions to our therapeutics. In the next part Dr. PETIT devotes himself to the subject of epistaxis, narrating a number of cases which

have been under the care of M. VERNEUIL, and others, in which the revulsive treatment had been of singular benefit, thereby further supporting the views of Dr. HARKIN. He next deals with hæmoptysis and traumatic hæmorrhage, bringing to bear observations of a somewhat analogous nature. It appears after all that GALEN should be credited with some share in the method of treatment under consideration. This has been pointed out by Dr. HARKIN and confirmed by Dr. PETIT. GALEN applied *ventouses* over the region of the liver, when the blood flowed from the right nostril, and over the spleen, when the blood flowed from the left. We may not be content to accept any of the explanations offered to account for the benefits derived either from the cold douche or by the vesicant; but we cannot afford to ignore the clinical observations under consideration, and we trust that we shall have a repetition of these therapeutical measures by other observers.

In the *Indian Medical Gazette*, Mr. VINCENT RICHARDS, who is so well known for his researches on snake poisons, has drawn up two plans which explain the processes involved, from rabic inoculation to rabic absorption. The great sources of fallacy in all cases of dog bites are clearly explained. The first source of possible fallacy is that the dog inflicting the injury may not be rabid, then if rabid, it may not at the time of biting possess the virus; since it is more than probable that the saliva of rabid animals does not contain the infecting materials at all stages, and at all periods, throughout the existence of the disease, and certainly not in the same intensity or proportion. Hence it is that, though the dog may be rabid, no virus finds its way into the wound. But supposing some has found its way into the wound, the quantity will vary. Taking it to be a small quantity, it may be washed out of the wound again by hæmorrhage, or it may be inoculated, in which case the quantity may be insufficient to infect; or it may be sufficient to infect. Taking the quantity to be large, it may be washed out by bleeding, and infection not follow, or infection may result. Mr. VINCENT RICHARDS' diagrams are very clear:



The second plan presupposes infection :



These diagrams explain why so many were protected after inoculation by PASTEUR. In reference to the Paris system, we miss the usual paragraphs in the daily papers announcing that Dr. So-and-So had gone to Paris in charge of So-and-So. The English patients as well as the Americans have fallen off. During 1888 two English patients went to M. PASTEUR; during that year all the other persons bitten in England had to be content with common treatment. During 1886 about ninety patients (English) sought M. PASTEUR's aid. From January to March, 1887, thirty-one English patients underwent inoculations. We have not been able to obtain the numbers since. We do know of a certain number of persons bitten in London from August, 1885, to June 30th, 1887. In 1885 there were bitten twenty-seven postmen, seventy policemen, 181 private persons—total 278. In 1886 thirteen postmen, 207 policemen, and 579 private persons—total 799. In 1887 twenty-one policemen, and 354 private persons.

These numbers only represent a fraction of the number bitten in the metropolis by dogs. People bitten do not usually report themselves at police stations. How many postmen have died of hydrophobia? How many policemen? The police, we know, have been bitten by rabid dogs and suspected dogs, during the time they seized over 40,000 dogs. Had the police been sent to PASTEUR they would have been classed amongst the "*gueris*," and PASTEUR's statistics would have shown even better results. Meantime, the Institute at Paris is being made ready for the treatment in the future of the dog bitten. A magnificent palace it will be, with *salles* for inoculation, etc., for the culture of the virus. As a French contemporary says: "There is danger of its becoming not only a palace, but a *hostelry for rabies*." Surely this is beginning at the wrong end. We must not simply be content in the future with treating human beings; hydrophobia depends on a disease in another animal. Rabies ought to

become rare in France, and human beings ought not to require such elaborate rooms or apparatus for their treatment. The dog laws of other countries—notably of Germany, etc.—point out the way of prevention, and prevention is better than cure. The French people who gave their donations surely did not desire the permanent installation of an institute for the treatment of dog bites.

The public interest is no longer fostered by paragraphs, and the fashion of going to Paris has died out. We hear little of the failures which continue much in the same proportion; the annual mortality keeps up to its average standard. The deaths of VILLEMAIN, of Marseilles; MESNIL, of Chatenay; SARRAZIN, St. Maurice; and LABEAUME, recorded in the "*Gazette Hebdomadaire des Sciences Medicales*," of September, are a significant corollary on the method. 1. VILLEMAIN, aged thirty-one, was bitten on the 9th of May, and treated at the Institute, from the 14th to 19th of June, dying on 23rd of June, 1888. 2. MESNIL, aged forty-four years, bitten 24th March by a cat, was treated at the Institute from 26th March to 12th April, dying on 30th July. 3. Madam SARRAZIN, St. Maurice, aged forty-four years, bitten 1st July, treated from 4th July, died on 4th August, 1888. 4. LABEAUME, bitten by a cat about 29th May, 1888, treated from 30th May to 2nd June; gave up treatment on 2nd June, returning on the 14th; inoculations were continued up till the 29th; died the beginning of July. Our readers should note the number of deaths after cat-bites. This is a very remarkable fact, not in accordance with our previous experience with hydrophobia. M. BOURREL, a well-known veterinary surgeon of Paris tells us that he received for treatment from 1859 to 1872 1,093 male cats and 238 female cats; that out of this number, only one was rabid. This cat came in on the 6th of October, 1860, and had been bitten by a mad dog. He says: "I have never heard of a cat communicating hydrophobia to a cat or dog." Of course, we must take into consideration that the cat-bitten patients do not come from Paris alone; but even making this allowance, the deaths are phenomenal.

Annotations.

"Forsan et hæc olim meminisse juvabit."

PROFESSOR LE FORT ON THE HEALING OF WOUNDS.

PROFESSOR LE FORT, who is attached to the Necker Hospital, does not believe that hospital air has an injurious effect upon open wounds, and to prove this he has exposed wounds caused by amputations to free contact with the germs of a hospital ward. The wounds healed without suppuration. Professor Le Fort is a believer in cleanliness, and moreover he believes that contagion may be carried to wounds by the surgeon, by dirty fingers, sponges, etc. Observations of this nature, made with care, must be regarded as scientific negatives of the popular belief or fashion which has of late years predominated the practice of surgery.

THE MAD DOG AND THE *FILLE DE BRASSERIE*.

THE *Press and Circular* asks : "What is the damage done by a mad dog in comparison with that done by a *fille de brasserie*?" This aspect of the state of affairs, *re* hydrophobia *v.* syphilis, is well worth considering. We have witnessed during the past two or three years a perfect panic about hydrophobia—a rare disease, the chances of dying of which are about half a million to one, or some higher number. The savants of the world have been mightily exercised over the disease, and we have had commissions on commissions taking evidence against the friend of man—the dog. We should be amused, if it were not such a sad and serious subject, for even one death in a million is worthy of preservation; but we may feel some degree of surprise when we think how a subject of this kind can arouse attention, when others more important are allowed to drift. Whooping cough is the cause of death of some hundreds of children each month in England. Whooping cough is such a common disease, that it hardly excites any interest. Syphilis causes an appalling annual mortality, but we cannot stir up the authorities to lessen the evil. We allow open, unchecked prostitution in London; verily the bite of the prostitute is worse than the bite of a dog, though we muzzle the dog, and allow full liberty to the *fille de brasserie*. This is an old subject with us. In 1872 we wrote in the *London Globe* as follows: "If the public were informed by telegraph that a large city of 30,000 inhabitants was suddenly destroyed by any cause, and that all therein perished, what consternation would be excited; what an amount of sympathy would be roused for the fate of the unfortunate victims, but it is a question whether this would arise from the actual circumstance of such a calamity, or from the novelty and suddenness of the news, for we have here in England more than 30,000 deaths occurring from preventable disease, which excite even less astonishment than what is given to a single case of hydrophobia. The mind, the public mind, is a very peculiar and complex body, and your correspondent, "Litterateur," though he has collected some interesting notes bearing on the influence of external impressions on nerve power, and on the mind, would have a more difficult task to explain why such should be the case; or why, considering that the chances of any individual dying from typhoid fever within this year are in the ratio of a thousand to one of his dying of hydrophobia, the individual should be more frightened of the improbable cause, than of the actual one staring him in the face, perhaps within twenty yards of his door, amongst his own tenants whom he has placed in conditions unfavourable to health." Time has only mellowed these observations, and, like good wine, they have lost nothing by being so long in bottle; they are true of the recent epidemic of fright about hydrophobia as they were of the former one. We need not feel astonished perhaps at the state of mind of the public in regard to such a subject as hydrophobia, but we may reasonably be astonished at the professional attitude in regard to it; the only excuse for it, perhaps, is, the rarity

of the disease, and the scant opportunity there is of seeing a case. In the public mind, using the words of a leader in a medical paper, "there is a lurid glare surrounding a death from hydrophobia." Is there not a lurid glare equally with the death from epilepsy, tetanus, phthisis, etc.? Why should the death from hydrophobia be more terrible than a death from tetanus or cancer? Are the sufferings more? The superstitions about hydrophobia are simply deplorable, especially in this boasted nineteenth century, the age of science and progress. The English *furor* about dogs has died out during the past year, and the number of English patients who have flocked to Paris has run down in a most remarkable manner, though dog-bitten patients are, in our experience, as frequent as ever. We are unable to control popular fashions. The craze in favour of spreading syphilis is unfortunately beyond our control, and we can only look forward to the time when fashion will change, and there may be a healthy reaction against this fearful and death producing disease. We may also look forward to the time when we may have some legislation in reference to whooping cough.

MEDICAL MEN AND THEIR WORK.

THE public undervalue medical men. They know little of the lives of the men who labour for their health's salvation. They know of the poets, sculptors, painters, architects, statesmen. Such a work as that of Mr. G. T. Bettany, entitled "Eminent Doctors: their Lives and their Work" (two vols.), is to be welcomed, as it must materially help to waken up some interest in medical labour. The lives of Sir J. Simpson, Sir Spencer Wells, Sir Joseph Lister, Sir James Paget, Sir Henry Thompson, Drs. Maudsley, Hughes Bennett, Guy, Simon, etc., faithfully given in these pages, convey lessons useful to the young student of medicine. The question is answered here as to contemporary biography, and as to its value. Longfellow did not sing in vain. One lesson the student will learn from these lives—viz., that work, hard work, is the secret of success. We cannot disguise the fact that jealous, narrow-minded, or unsuccessful men, do not like such a work as that of Mr. Bettany's, and we cannot help such men from uttering their splenic attacks. Toads will spit venom; it is their nature. Mr. Leyland's work may be regarded as a supplement to Mr. Bettany's—plus the illustrations. Mr. Leyland calls his work "Contemporary Medical Men," so that there is no encroachment on the other work.

EMPEDOCLES.

THE favourite theory of Empedocles, the famous philosopher of Agrigentum, was that the blood of man contained an infinite number of demons. Now, allowing for the state of medical science in the period at which Empedocles lived, we must not be too severe upon him; less so, because at the present day we have a revival of his theory, with this slight difference, that the microbe has taken the place of the demon. The article on the germ theory in the last number of the *Asclepiad* is a remarkable contribution.

COINCIDENCES IN JOURNALISM.

DR. E. S. McKEE read a paper before the State Medical Society of Kentucky on "Dublin Obstetrics," detailing the mode of delivery, etc., practised at that famous school, and concluding his paper with some verses on some old obstetricians. The *New York Medical Record*, of August 18th, has a letter from *its own* Dublin correspondent on the same subject, and it concludes with the same verses. The article in the *New York Medical Record* is so clearly like the paper of Dr. McKee, that we are rather puzzled, and would ask: "Is Dr. McKee the Dublin correspondent? If so, did he write the Dublin letter from Cincinnati, Ohio? If not, did the "Dublin" man (in New York) write the letter—doubling his character?" These coincidences are very common in the *New York Record*, if we may believe the *St. Louis Medical Journal*. Some call them plagiarisms.

EPIDEMICS OF CRIME.

FROM a cursory glance at our daily papers one would feel inclined to believe that we were passing through an epidemic of crime, and especially crime of a revolting and horrible nature. Unfortunately this is not the case, and we say unfortunately because if it were an epidemic it would soon be over and expend itself. We are in much the same condition as regards crime, only we have more publicity now. The press which has a high mission does not faithfully fulfil it: crime pays, the records of these brutal assaults are eagerly read, and for the sake of sales we have chronicles of crime in special columns, and the press is becoming police news. There is one paper which is a disgrace to the press and which certainly comes under Campbell's Act.

DEPENDENT INDEPENDENCY!

THE British workman is a very fine fellow! He has been told this so often, especially at election times by candidates for a seat in Parliament, that he believes that he is a fine fellow. In the words of Longfellow:

"He looks the whole world in the face,
For he owes not any man."

He is too proud to beg, etc. He does not call it begging to accept gratuitous aid at the local dispensary, or to ask a subscriber to give him a recommendation to the infirmary. He does not think it begging to send his wife or child to the waiting-room to have a bottle filled with cod-liver oil, or some tonic or cough medicine which he could obtain at the nearest chemist's for the price of his glass of beer. This is his right. Occasionally a subscription is raised, and he gives a few pennies; from the many thousands and thousands of working men a few hundred pounds are raised, and this is given to the institution from which he derives medical aid. He obtains a 100 per cent. profit on his donation; but what a flourish of praise is bestowed upon him for his liberality! The charitable institutions of England are maintained for the benefit of the independent working man.

THE ORGANIZATION OF THE SANITARY CORPS
OF THE GERMAN ARMY.

W. T. PARKER (M.D. Munich), late acting surgeon U.S.A. Army, has just published in the *New England Medical Monthly* an outline of the organization of the sanitary corps of the German Army, and judging by the details on paper, we do not wonder at the efficiency of that corps. We commend the communication to the attention of all interested in army medical affairs. The high position accorded to the surgeon is not exactly expressed in rank, but, better still, it is shown by the value set on the services of the surgeon, and in the efforts made to make the service efficient. The German Army surgeon has a definite rank, and is invested with military title and power. The details of the medical service are followed out with the same scrupulous care which marks German attention to detail in military matters, and these can be learnt by reading Dr. W. T. Parker's interesting outline.

THE ADULTERATION OF TEMPERANCE DRINKS,
TONICS, AND BITTERS.

Dr. CHENERY, Boston, U.S.A., has devoted himself to the exposure of the adulterations practised with temperance drinks, besides tonics and bitters. He finds that "alcohol" is the adulterant, so that the drink crave is encouraged. He has published a long list of popular bitters and tonics in the *Medical Register*, giving per cent. of alcohol in each. One of these preparations contain more alcohol than the strongest brandy. Exposure may do good.

REFORM AT THE TOP.

IN all we have written on the the social aspects of the profession, and on its state at the present time, we have been true to one principle—viz., that the interests of the profession in all its parts are one and identical, and that in popular phrase, what is sauce for the goose is sauce for the gander. We have been much struck by the difference in the punishment meted out to offenders against medical ethics by our sapient and wise-controlling bodies—the press being involved, for the press has a certain influence. In a well-known journal we see continually censure poured on the head of some poor struggling practitioner, who to make bread and cheese resorts to the handbill and the painted window; but we do not find any reference to the titled sinner, who does exactly the same thing in another way—by paragraphs about the patient he is attending, or by adroit puffs in well-known journals; or by the advertisement of his books in the advertising pages of the *Times*. There is no difference in the offence, only in the means: the poor man adopts the vulgar method; the rich one the more fashionable plan—the puff represents a good dinner, and the advertisement a round sum of money. We have been asked by several correspondents to publish articles condemnatory of certain practices in the way of advertising, but we have told our correspondents that we cannot condemn local men for doing what the metropolitan leaders do. Reform must begin at the top.

HOSPITAL OR ASYLUM?

THE time-honoured name asylum has been given to those institutions devoted to the care of persons of unsound mind, and at one time it was a very good name, it meant that they had a home, that they were protected from the gibes and sneers, and from the unkindness and even cruelty of friends, and that in this home they enjoyed rest, ease, and medical supervision. The asylum, as we know, gave more than protection, excellent medical treatment has been superadded, but something more is required. The asylum of the present day is a vast institution, in which are gathered together some 1,400 insane. The curable and incurable are blended together, though attempts are made at classification. The medical superintendent is weighted down by the cares of his office, and by the vast numbers for whose treatment he is responsible. The name asylum must be changed. There is one very great reason for this change, which is not sentimental. The workman, suffering from some temporary form of insanity, suffers from being sent to an asylum. He does not suffer when he is under treatment at a hospital or infirmary. There is a stigma attached to the enforced residence in an asylum. This might be removed in some degree if the word hospital be introduced. What is really wanted are small hospitals for curable cases of brain disease.

HOSPITAL STARVATION AND HOSPITAL EXTRAVAGANCE.

WHILE on the one hand the hospitals are crying out for want of money, we have on the other, in the balance sheet of certain hospitals, glaring instances of extravagance. What shall we say of hospitals which spend £180, £176, £130 on each occupied bed? other hospitals showing a cost of £43 to £30. £70 to £80 appears to be the average sum, taking the Metropolitan Hospitals as a whole. It appears clear that either the hospitals which spend £170 or £180 are extravagant, or that the hospitals which spend £80 or £40 per bed do not do justice to their patients. Hospital managers must attend to this question. The public are less willing than ever to contribute, and as the public are now well informed on subjects of this kind, the sooner retrenchment takes place the better. In France such discrepancies in expenditure could not exist, owing to the system of management adopted there.

BOYCOTTING AT THE MANCHESTER ROYAL INFIRMARY.

WE regret to learn from a circular just received from the secretaries of the Irish Medical Schools and Graduates' Association, that boycotting is being put in force in the medical elections at the Royal Infirmary. Exclusive dealing has been so vigorously condemned by the Manchester press that now we hope this local manifestation of the spirit will be brought under the notice of the Manchester editors, and that we may have a vigorous denunciation of the evil when applied to medical matters. The statement put forth

by the Irish Medical Schools and Graduates' Association is a calm and judicious one, and the arguments are unanswerable. We are all the more surprised at the action of the governors of the Royal Infirmary, after the resolution passed at the Glasgow meeting. The British Medical Association, the largest medical organisation in the world, in full general meeting assembled, condemned the monopoly sought to be obtained by the London colleges. The subscribers to the Manchester Royal Infirmary, we feel sure, do not desire to limit the field of selection of its medical officers. By the rule now sought to be enforced they cut off from competition men of the highest accomplishments, and of the highest qualifications. We trust that after they have read the statement the obnoxious bye-law will be rescinded.

THE BRITISH ASSOCIATION.

NEARLY 2000 members attended the meeting at Bath, so that in point of numbers the meeting may be regarded as a most successful one. The President, Sir Frederick Bramwell, had to be content with a practical address on the importance of small details to the man of science, and on the services of civil engineers who apply the discoveries of science. There was no burning question of the day, and no great discovery to chronicle, because we have been satiated, and we are now digesting the menus of former years. Those who attended the Association for instruction enjoyed the address. The British Association at one time enjoyed an exceptional position as regards new discoveries, and members kept their best papers for the annual meeting, and from this platform published their new discoveries. All this has been changed by the press and by competition. A year is now too long to wait. New discoveries are published at once in scientific journals; there is less danger thereby of being forestalled; the mission of the Association will not be injured by this; the advancement of science is its great object; the public will be instructed just as much, though they may not be treated to new discoveries.

THE CONGRESS ON TUBERCULOSIS.

THE following important resolutions were passed at the recent Congress:

1. Boards of health should be empowered to investigate all cases of disease in animals, those which are known to be transmissible to man as well as those which are not yet recognized as of this nature.
2. The Congress expresses its gratitude for the decree which has just been signed by the President of France, placing bovine tuberculosis among the contagious diseases.
3. The seizure and destruction of all tuberculous animals, whatever may be their appearance of health, should be a constant practice.
4. The conclusions of this Congress are applicable to all countries, and should not be considered as referring to France alone.
5. Every effort should be made, by means of circulars, lectures, etc., to warn the laity of the dangers of acquiring tuberculosis by the use of the flesh and milk of diseased animals, and to instruct them as to the best means of avoiding these dangers, and of escaping contagion through various articles used by those sick with pulmonary tuberculosis.
6. Special watchfulness is necessary in the inspection of dairies, to prevent the contamination of the milk by that coming from a diseased cow.—*Med. Record.*

DR. WOLFE'S OPINION ON THE TREATMENT OF ULCERATION OF THE CORNEA AND KERATOCONUS BY THE GALVANIC CAUTERY.

IN discussing two papers on the above subject, the authorship being ascribed to an English surgeon, Dr. Wolfe remarked that the operation was practised in the Homeric period by the crafty Odysseus. His operation on Polyphemus is minutely described by Homer. There was no chloroform, no cocaine or antiseptics of any kind; the only anæsthetic used was by making the patient dead drunk; then he took a pointed log of wood, which he put into the fire and made hot; this was then pushed through eyelid and eyeball, making the tissues hiss and crackle. This proved very successful, for Virgil tells us that Æneas and his party passing the island some years later saw the patient, the bloody and monstrous ruffian, walk to the sea shore, and wash the hollow where an eye formerly had been. Dr. Wolfe continued, and said he could not allow the present opportunity to pass without entering his protest against the practice of burning the human cornea; whether it is done by means of a heated piece of wood, a hot poker, or by the galvanic cautery, it is a burn all the same, which cannot be limited in its extent, and that he has seen many disasters resulting from its use. In cases of conical cornea, the cone can be easily rendered opaque by simply tattooing it.

New Remedies.

THE barks of *Rhamnus Purshianus* and *R. Frangula* have recently been examined by Herr Schwabe. From the latter he obtained two bodies, one of which he identifies with the emodin of rhubarb, and with the frangulic acid obtained by Faust, and the other is the glucoside frangulin. He believes that the emodin is formed from frangulin, which splits up into emodin, and a sugar which is probably identical with rhamno-dulcite. From fresh bark he failed to obtain any frangulin, and only traces of emodin. The direction given in the P.B., that the bark should be kept one year before being used, receives, therefore, some support from this investigation. From *R. Purshianus* he obtained only emodin, but failed to separate any frangulin.

Some experiments on the physiological action of malonic and methylsuccinic acids have recently been communicated by Dr. Heymans to the Physiological Society of Berlin. He found that as compared with oxalic acid they were less poisonous—seven to eight milligrams of methylsuccinic, and two to three milligrams of malonic, and one milligram of oxalic being required to kill a frog.

A new substitute for nitrite of amyl is recommended by Messrs. Bals and Broglio in *Nouveaux Remèdes*. It is described as the nitrous ether of dimethyl-ethyl-carbinol (amylene hydrate). It is a very mobile liquid of an amber colour, lighter than water, and having an odour recalling those of camphor and terpin. It is insoluble in water, slightly soluble in glycerine, and very soluble in ether, alcohol, and chloroform. Its physiological action is more marked and permanent than that of nitrite of amyl, but it does not cause flushing of the face, and can be inhaled to the extent of eighty to one hundred drops daily.

The Cape cancer remedy recently sent over to this country, and consisting of the twigs of *Sutherlandia frutescens*, does not appear to be so highly valued at the Cape of Good Hope as appears to have been at first represented. Professor MacOwen remarks in the *Cape Times* that he is surprised to find any medical virtue attributed to the plant, and he entertains but little hope of a successful result from its use. He has, however, a high opinion of another plant used in the same country,

under the name of "kruidje voer mij niet." This is the *Melanthus major*, a plant belonging to the natural order *Sapindaceæ*. It is used in cases of tinea capitis, crusta serpiginosa, necrosis, and foul ulcers. The bruised leaves are also applied to ulcers to promote granulation.

Sonchus oleraceus, the common sowthistle, has been found by Dr. S. F. Landry to behave as a powerful hydragogue cathartic, and to act strongly on the liver, duodenum, and colon. It resembles elaterium in producing large and watery discharges, and has proved a valuable therapeutic agent in ascites and hydrothorax. Unless cautiously administered, however, it is liable to produce griping like senna, and tenesmus like aloes. To counteract this tendency, Dr. Landry recommends that it should be given in combination with magnesium carbonate, manna, and aniseed, or with other stimulants and aromatics.

Saraca indica, known in India as the åsok tree, has lately been brought under the notice of the medical profession in this country as a useful remedy in uterine complaints, especially in cases of menorrhagia. The bark is the part used, and it is given in the form of decoction twice a day. It appears to be much relied upon by Hindoo physicians.

Dr. H. H. Rusby, in the *Therapeutical Gazette*, describes some experiments made with *Cocillaria bark* (*Sycocarpus Rusbyi*) obtained by him from Bolivia. It appears to be a powerful emeto-cathartic and expectorant, and so far as one can judge from the symptoms produced in a healthy person, the drug seems to cause a kind of catarrh. Its action in curing catarrh must therefore be homœopathic in character, if it be really effective, as is claimed by Dr. Rusby.

A new active principle has recently been detected in tea by Prof. Kossel, and has been reported on by him to the Berlin Physiological Society. It has as yet been detected only in small quantities, and its physiological action has still to be ascertained. It seems possible that it may have something to do with the different physiological effect of tea as compared with coffee. The formula given to the new base, which is called theophylline, is $C_7H_8N_4O_2$. It is isomeric with theobromine and with paraxanthin, but differs from those substances in its reactions. The introduction of a methyl group into theophylline converted it into caffeine, and as the latter was proven by Fischer to be trimethylxanthine, it seems obvious that theophylline must be a dimethylxanthine.

A new material for antiseptic dressings has been found in the combings from China grass fibre, *Bahmeria nivea*. These combings form an elastic silken wool, which when treated with four per cent. of salicylic acid, forms an excellent absorbent dressing, which is much cheaper than the usual dressings employed in surgery. Mr. H. B. Hewetson states in the *Lancet* that he is highly satisfied with the results obtained from the use of this dressing. Its chief advantage appears to be in its absorbent character, thus preventing the caking together of the exudations from the wound, which it renders very dry. The dressing should be teased out before use, and it is advisable to place some open meshed gauze between the dressing and the wound, so as to prevent the adherence of the fibre to the wound.

In a paper in the *Practitioner* on "Injections of Osmic Acid in Muscular Rheumatism," Dr. Grinevitski incidentally mentions the excellent results obtained by him from the use of *papain* in cases of indigestion, in dyspepsia, and in chronic cases associated with acid eructations, and with painful gastric fermentation. He gives two grains of Finkler's papain with milk sugar one or two hours after meals, in a spoonful of an alkaline mixture containing sodium bicarbonate, aromatic spirit of ammonia, carbolic acid, and glycerine. He states that this has a good effect on the pain caused by acid fermentation while hymification is going on, by neutralising the acid as it is formed. Papain is, he believes, unrivalled as a remedy for this condition; it causes hard food to be digested, and the fibrous tissue of meat and vegetables to become dissolved. He has by this treatment cured some long standing cases of dyspepsia associated with gastric pain and with constipation of the most obstinate description.

Under the name of *Trefusia* a preparation has been introduced by a chemist at Naples, which is stated to represent the solid constituents of the arterial blood of young healthy cattle. It has been analysed at the Pharmacological Institute at Naples by M. Gautier, who found it

to contain serum, globulin, paraglobulin, etc., 89.733; extractives, 2.475; inorganic salts, 6.294; oxide of iron, 0.382; losses, 1.116. The preparation has been employed by Professor Tommasi in cases of anæmia and chlorosis. He states that it is rapidly absorbed, and forms new blood corpuscles. It is given dissolved in chocolate, milk, or coffee, in cases in which iron, quinine, and cod liver oil, etc., were formerly given.

In the *Asclepiad* (vol. v., No. 19, p. 240), Dr. B. W. Richardson recommends the use of benzoated chloroform as an antiseptic of considerable service in the treatment of fetid wounds. It is made by dissolving three drachms of pure benzoic acid in twelve ounces of chloroform, and filtering if necessary. In a case of fetid ulcer of the lower extremities, after the bandage has been applied, he prescribes a fluid drachm of the solution poured over or near the ulcer, the deodorising effect being of the best character. He states that the solution is also the most effective that he knows of for removing the fœtor in troublesome cases of fetid exhalations from the feet. Used like eau de Cologne, he finds it advantageous to rub over the hands at a *post-mortem* examination, and for similar purposes where a disinfectant is required.

Saccharin has at length been shown to have a medicinal value, apart from its sweetening properties. According to Dr. Constantine Paul, it possesses valuable antiseptic properties, and is especially useful in diseases of the digestive passages. In doses not exceeding three to four grains it causes no disturbance of nutrition. He has seen patients suffering from diabetes who have taken it for five months without any evil result whatever. In a few cases, however, it seems to have arrested the action of the digestive ferments, causing pain in the stomach, diarrhœa, etc. Dr. Paul especially insists on the antiseptic properties of saccharin. He states that one part to two hundred prevents the ammoniacal fermentation of urine, and arrests the development of *bacterium termo*; one in three hundred that of the *streptococcus* of puerperal fever; and one in five hundred arrests the development of *staphylococcus pyogenus*. A 6 per cent. solution also forms an excellent dentifrice or tooth tincture. Dr. Paul's statement has lately been confirmed by Dr. J. Little, President of the Royal Academy of Medicine in Ireland, who administered saccharin to a patient aged eighty, whose stomach was too irritable to bear quinine and boric acid. After the use of six tabloids daily for three or four days, the ammoniacal urine of the patient became inoffensive in odour.

Periscope.

I.—GLEANINGS IN MEDICINE.

By W. B. KESTEVEN, M.D.

Strange Course of a Bullet. By Surgeon Frederick Skerret, Toungoo, Burmah (*Indian Medical Gazette*, May, 1888).—The following may not be uninteresting as exemplifying the erratic courses on occasions taken by bullets:—An officer's butler was "biting" in the usual manner of natives (his knees and his neck apparently being about on the same level). A but-man was seated on his right, discussing politics or pice, or some other congenial subject, and cleaning a loaded revolver. The revolver went off. The bullet entered the butler's right knee on its outer side, opened the joint, and running along the upper and outer border of the patella (which bone it grazed), made its exit on the anterior aspect of the knee. It then entered his neck on the right side, a little below and almost in a line with the angle of the jaw, and passing subcutaneously round by the back of the neck, lodged in the posterior inferior triangle on the left side, where, by pressure on the brachial plexus and numbness down the arm, its presence was ascertained, and it was accordingly removed. Suppuration occurred in the knee with very high temperature and the usual attendant symptoms. The joint was freely opened, the pus evacuated, a drainage tube inserted, and drainage kept up for weeks. Perchloride of mercury solution, 1 in 4,000, was freely used. The pus changed to a serous discharge; the wound healed from the bottom and eventually closed; and before three months the boy walked out of hospital without even the aid of a stick. He had, however, a partially stiff joint.

Puerperal Sapræmia. By Wm. S. Gardner, M.D., Demonstrator of Obstetrics in the College of Physicians, Baltimore (*Medical Register*, Philadelphia, July 14th, 1888).—Among the grave diseases of the puerperal period is *sapræmia*, or septic intoxication in which there is an absorption of a chemical poison produced by the decomposition of placenta, membrane, blood clots, or lochia. The symptoms come on after the second day, and before the end of the fifth. The uterus is large and flabby; there is a decomposing discharge, with entire absence of pain over the abdominal and pelvic organs. There is an increased pulse, ranging from 110 to 140; there is a rise of temperature above normal of from four to six and a half degrees. In all cases the temperature either falls of itself when the cavity of the uterus is thoroughly washed out, or can easily be controlled by antipyrin. In the cases which begin before the milk-flow commences it is never established. Septicæmia is the disease most frequently confounded with *sapræmia*. While there may be in some cases difficulty at first in saying positively which disease is present, the differentiation is usually quite easy to make. *Sapræmia* comes on usually from the third to the fifth day after labour; *septicæmia* appears the first or second day of the puerperal period. In *sapræmia* the uterus is always relaxed; in *septicæmia* it may be large, but is firm. In *sapræmia* there is no tenderness of the pelvic or abdominal organs; in *septicæmia*, if the patient live twenty-four hours, there is always tenderness either of the pelvic or abdominal organs, or both. In *sapræmia* the temperature ranges high, 104°-5°-6° being common; in *septicæmia*, except just before death, or after the formation of abscesses producing a secondary *sapræmia*, it is rare for the temperature to go above 102.5°, or at most 103°. In *sapræmia* the pulse is rapid and weak, ranging from 110 to 140, but there is a marked decrease with the fall of temperature; in *septicæmia* the pulse is small, and ranges from 120 to 160, and with a reduction of the temperature there is not a corresponding decrease in the pulse. In *sapræmia* the temperature can easily be controlled if the cavity of the uterus is sufficiently cleansed; in *septicæmia*, intra-uterine injections are absolutely useless. In the treatment, four objects should be kept in view: 1. To keep the cavity of the uterus clean. 2. To secure tonic contraction of the uterus. 3. To control the temperature. 4. To support the patient. To keep the cavity of the uterus clean there is nothing equal to antiseptic intra-uterine injections. In some cases ergot and vaginal injections will succeed, but they are not reliable. I use, both as a vaginal and intra-uterine wash, a solution of corrosive sublimate 1-4000. A solution of the strength of 1-2000 is kept constantly on hand, and when wanted for an injection it is diluted with equal parts of hot water. The temperature of the water when injected should be as high as that of the patient upon whom it is used. To secure contraction of the uterus, fifteen to twenty minims of fluid extract of ergot should be given every two or three hours, the shorter interval being the preferable one. If the time between the doses be so long as four hours the uterus relaxes, and an increased opportunity for the accumulation and absorption of the products of decomposition is given. The same proportion of ergot does not act with equal power upon all patients, and the dose must be varied until the amount is found that keeps up a firm uterine contraction. In giving ergot hypodermically, the injections are preferably made into the lower part of the outer side of the thigh.

The Heart in Locomotor Ataxia (*Medical News*, Philadelphia, July 7th, 1888).—A leading article in the *Medical News* gives the following interesting information on the above topic:—Berger and Rosenbach, in 1879, called the attention of the profession, in a brief notice in the *Berliner klinische Wochenschrift*, to the association of aortic insufficiency with locomotor ataxia. They published notes of seven cases without comment. In the following year, Angel, in an article in the same journal, entitled "The Coincidence of Heart Lesions with Tabes," reported, in a series of twelve patients suffering from locomotor ataxia, five cases in which was the sign of aortic insufficiency, namely, a diastolic murmur, present only, however, after muscular effort, and disappearing during prolonged rest. The murmur was not heard at all in the morning while the patients still remained in bed. This observer regarded the manner in question as due to abnormal action of the heart-muscle. Groedel, whose opportunities for the study of locomotor ataxia at Bad-Nauheim have been very extensive, regards the occurrence of cardiac affections in this disease as wholly accidental (*Deutsche medicinische Wochenschrift*, May 17, 1888). In this view he concurs with Eulenburg and Erb. Between 1875 and 1879—namely, at a time when his attention had not yet been especially called to the subject—Groedel noted, in forty-three cases of locomotor ataxia, only two in which the signs of valvular disease were present. The records of this period refer either to absence of heart complications in the other forty-one cases, or to the occasional occurrence of quickening of the pulse rate and pericardial distress and oppression. Between 1880 and the close of 1887, a period during which every case of locomotor ataxia was studied with especial reference to the condition of the heart,

valvular lesions were detected in only four out of one hundred and eight cases, and in no instances was he able to recognise the murmur of aortic insufficiency after muscular exertion, as described by Angel. Cardiac phenomena of a different kind were, however, very frequently observed. These consisted of feeble action of the heart, increased frequency of the contractions, small pulse, faintness of the sounds—manifestations not only common in enfeebled subjects, but also in those well-nourished and strong. The patients presenting these signs frequently complained of palpitation, shortness of breath on exertion, even of occasional attacks of palpitation while at rest and after excitement. In only two instances were these symptoms associated with the signs of dilatation of the right and left chambers of the heart. He concludes that even these symptoms are in no wise characteristic of locomotor ataxia, since they occur in all kinds of chronic maladies associated, as is so commonly the case, with anæmia and neurasthenia. Leydon has noted four cases, and Vulpian one case of locomotor ataxia in which peculiar paroxysmal attacks closely resembling angina pectoris occurred.

Treatment of Summer Diarrhœa in Infants (*Medical News*, Philadelphia, July 7th, 1888).—This subject is discussed in seventeen pages of the *Medical News*, by Arthur V. Meigs, M.D., Physician to the Pennsylvania Hospital, and by Dr. Simon Baruch, Physician to the New York Juvenile Asylum. These gentlemen have herein discussed all the bearings—dietetic, pathological, and hygienic—of this affection, which at times has proved extensively fatal, the causes of which are enumerated as follows:—1. Insanitary conditions, such as overcrowding, poverty, and filth. 2. Artificial feeding. 3. High atmospheric temperature. These causes are accepted only as predisposing elements, favouring the development of bacteria, which are to be regarded as the true potential causes of summer diarrhœa. Of these causes the greatest share in the production of the disease is assigned to high atmospheric temperature, which favours the development and multiplication of bacteria. The indications of treatment are summed up—1st, to diminish or remove the source of bacterial supply; 2nd, to neutralise the disturbance produced by the bacteria; 3rd, to remove them from the intestinal tract; 4th, to avert the nervous prostration, inanition, exhaustion, and other manifestations due to the diarrhœa. The first indication is to be met by artificial feeding. The second indication is to be followed by diet and medical treatment. In carrying out the third indication, the main object is to sweep out the contents of the intestines by aperients and by irrigation. Bichloride of mercury in the proportion of half a grain to a quart of water has occasionally been advantageously employed. Fourth, the nervous prostration, exhaustion, and other manifestations of diarrhœa are probably due to the absorption of ptomaines. These effects are successfully combated in a large number of cases by the judicious use of the cold bath and wet sheet. Alcoholic stimulants are regarded as valuable aids to tide over the danger of collapse and inanition, and opiates have been cautiously used to allay the irritation of the intestinal canal, and for comforting the patient. In the preceding remarks we have been able to do little more than allude to the chief points treated so fully by the authors. Artificial feeding and diet alone have secured for themselves the greater part of these essays.

Amylene Hydrate (*Medical News*, Philadelphia, July 7th).—Dr. Lares, in an article in the *Berliner klin. Woch.*, of May 21st, 1888, presents the following conclusions:—1. Amylene hydrate is a very useful hypnotic, which may be given in two or three times as large a dose as chloral hydrate. 2. It operates somewhat less certainly than chloral hydrate and morphine. 3. Unpleasant accidents (excitement, slight drunken-like stupor) were very seldom observed. Grave accidents were never observed. 4. A tolerance, relative to diminution in efficiency, was not noticed within three months. 5. The deep and refreshing nature of the sleep obtained was praised oftener than in the case of any other sleep-producing means.

New Remedies (*Journal de Médecine de Paris*, August, 1888).

1. *L'alaninate of Mercury* in Syphilis.—L'alanine is derived from lactic acid and propylglycole. It has been designated also *lactavine* or *amido-propionic acid* (!) To obtain the alaninate of mercury, the alanine is to be dissolved in five times its weight of distilled water; while boiling, small quantities of binoxide of mercury are to be added as long as it dissolves. Filtered and evaporated, a white crystalline powder is obtained, soluble in three times its volume of cold water. M. de Luca has employed this salt hypodermically in syphilitic diseases, in doses of from five to fifteen milligrammes daily. The use continued for forty-five days has frequently proved sufficient.

2. *Frangipancier blanc* (*Flumeria alba*).—This plant, the same as our English jessamine, grows in the Antilles, where the bark and the root are employed medically against hæmorrhagia. The fresh bark is infused in water for four or five days. Its action is purgative at first, afterwards exerting its influence upon the urinary organs. An extract of the bark

is given four or five times a day in doses of from twenty to twenty-five centigrammes. The natives employ it as an alterative, and use it as a substitute for sarsaparilla.

3. *Simulo* in Epilepsy.—Simulo, the fruit of the capparid coriaca, a native of Peru and Bolivia, has been employed in the form of tincture with great advantage, in doses of from two to eight grammes, three times daily.

4. *Methylal*.—This substance is regarded by Dr. Krafft-Ebing as the best sedative and hypnotic for cases of delirium tremens. It is administered hypodermically in doses of ten centigrammes, repeated every two hours.

5. *Tribromophenol*, a combination of bromine and phenol, is vaunted as a remedy in skin diseases.

6. *Eucalyptus* in Diseases of the Skin.—Iodoformed eucalyptol has been found by Dr. Maison to be of great use in psoriasis and other scaly diseases.

7. *Sabatia angularis* presents all the properties of the centaury family. It is used as a tonic in the United States.

Revue de Thérapeutique (*Le Progrès Médical*, August 25th, 1888).

—(1) *Paraldehyde*, (2) *Agaricine*, (3) *Strophanthus*, (4) *Pyridine*, (5) *Canadol*, (6) *Cytisine*, (7) *Scopolia Japonica*, and (8) *Salol*, are here passed in review with reference to their therapeutic properties.

1. *Paraldehyde* produces sleep by its direct action upon the grey matter of the brain, then upon the medulla, and, lastly, upon the spinal cord. After a fatal dose the functions of the bulb cease, but cessation of respiration precedes the abolition of cardiac contractions. Its hypnotic action is not preceded by a period of excitement as observed in other remedies of the same class. It is an hypnotic and not an anæsthetic; in its effects it resembles chloral, but has not its depressing influence.

2. *Agaricine*, in doses from $\frac{1}{2}$ to $\frac{1}{4}$ th grain, has been employed in abnormal secretions, especially the secretions of phthisis, combined with atropine or opium, as it occasionally gives rise to diarrhœa.

3. *Strophanthus* acts upon the muscular structure of the heart, the contractions of which become stronger, and it augments the blood pressure. It may, with advantage, take the place of digitalis, as it does not cause contraction of arterioles. It is, as compared with digitalis, rather a stimulant than a cardiac tonic. It is preferably administered in repeated small, than large doses. In one instance cerebral disturbance has been known to follow the administration of strophanthus.

4. *Pyridine*. A volatile colourless liquid of a pungent odour and taste, obtained from the distillation of pit coal, or of bones; it is found also in the combustion of tobacco, nitric papers, and other organic substances. It is, according to Harinadi and Meyer, a stimulant to motor centres, and nerve endings. It is also a local irritant, and, injected into the circulation has produced death by paralysis. M. G. Sée states that it diminishes the reflex excitability of the spinal cord and respiratory centres, and adds that it is the active principle in the cigarettes used for asthma. Renzi finds that it diminishes the frequency of the heart's beats, increases the force of the cysts. It may be used by way of inhalation.

5. *Canadol*. A limped, volatile, inflammable liquid, having the odour of benzole, insoluble in water and in alcohol. It has been employed in place of ether in Richardson's spray apparatus, producing cutaneous congelation in from thirty to ninety seconds.

6. *Cytisine*, the extract of cytissus, contracts the vessels. The nitrate of cytisine has the most distinctly beneficial effects on migraine, one-twentieth of a grain effecting the disappearance of pain in half an hour.

7. *Scopolia Japonica* yields two active principles, scopoléine and rotoïne, which act upon the pupil-like atropine and daturine.

8. *Salol*, salicylate of phenol, forms a white powder insoluble in water, soluble in alcohol and ether. It is eliminated by the kidneys. It is absorbed by the duodenum, where it is resolved into its two elements. It lowers temperature and increases the frequency of respiration. It has been employed in rheumatism, and as an antipyretic in fevers. Its dose is from one to two grains. It has also been found to control diarrhœa, and gives relief in acute dysentery, administered in enemata.

Extract of Helleborus Viridis in Diseases of the Heart (*L'Union Médicale*, August 14th, 1888).—Dr. Christovich (*La Revista de Ciencias Médicas de Barcelona*) gives the result of a number of experiments upon dogs and frogs, and of the administration of this plant as a medicine in eleven cases of cardiac affections, thus—1. It increases the action of the heart and augments the fulness of the pulse. 2. In cases of excessive cardiac action it diminishes the morbid activity. 3. It relieves congestion of the lungs, liver, and kidneys. 4. It augments the secretion of urine. The medicine is given as a soluble extract.

Saccharin: its Employment in Alimentation (*Le Progrès Médical*, August 25).—The report of a committee on the above subject

was read at a meeting of the Société Therapeutique, Paris, on the 11th July, presenting the following considerations. As a general rule antiseptic substances, such as prevent fermentation, should not be employed in alimentation. Any substance to be used as food should be susceptible of change in the animal economy. Saccharin is not only not food, but it is more, by its antiseptic properties it renders alimentary substances with which it is mixed insusceptible of change. To replace sugar by saccharin is to substitute an inert for an alimentary substance; it is to hinder those changes which amylaceous matters should undergo. In reply, therefore, to the questions by the Minister of Commerce, the committee state: 1. Saccharin is not food, and cannot replace sugar. 2. Its employment prevents the transformation of starchy or albuminous substances in the digestive canal. 3. It therefore augments dyspeptic disorders. 4. Although the introduction of saccharin is of too recent date to determine the extent of its injurious influence, the committee are of opinion that its use in alimentation should be prohibited.

Hallucinations in Relation to Language. By M. J. Seglas (*Le Progrès Médical*, August 25th).—Dr. Seglas relates the case of a patient in the Salpêtrière, who heard voices speaking to her from her epigastrium. These interior voices, as she called them, she could clearly distinguish from exterior voices. She recognised them as the voices of members of her family. The words were pronounced without sound, but so distinctly that she felt obliged to repeat them, though they were obscene and ribald words, revolting to her, and such as she had never pronounced by her external voice. In another case, the tongue moved in obedience to interior language, but uttered no sound, although the expressions were distinctly recognised. Dr. Seglas cites several similar instances, and considers them as psycho-motor hallucinations originating in the centre of articulated language. The full details and considerations of this form of hallucinations are summed up in the following conclusions: 1. Besides the common auditory and visual hallucinations, there exist hallucinations of language, visual, verbal, and auditory, which must be regarded as psycho-sensorial when regarded with reference to the centres of sight and hearing. 2. The motor centres of language may be the seat of phenomena of the same kind. 3. Psychical hallucinations more frequently include a motor element. They may be divided into three groups—one purely verbal-motor, others including a sensorial element; or lastly, they may consist in a peculiar mental condition not amounting to absolute hallucination.

A New Mode of Narcosis (*Journal de Médecine de Paris*, August 12th, 1888).—The novelty in this method, proposed by Professor Obalowski, consists in the subcutaneous injection of cocaine at the seat of an operation after the effects of chloroform have been obtained. The advantages claimed for this method are—1. The local anaesthesia is more effective. 2. Vomiting occurs less frequently. 3. Waking is easier and the subsequent weakness is less. There is sometimes, in nervous patients, a considerable degree of excitement attendant upon the subcutaneous injection.

On the Lymphatics of the Brain (*Fortschritte der Medicin*, August 15th, 1888).—MM. M. J. Rossbach and E. Selerswale describe three systems of lymphatic channels in the grey substance of the brain. (1) The perivascular and so-called adventitious lymph spaces; (2) channels subservient to the nutrition of the ganglion-cells; (3) a system subservient to the neuroglia-cells. The authors hold that the perivascular spaces are not of artificial production, but may be detected in living animals, and in sections of brain treated with osmic acid. When cervical veins have been ligatured, the lymphatic spaces are observable in the congested brain. These spaces may also be seen in sections that have been hardened by chromic acid and alcohol, through the shrinking of the vessels, wider than in the fresh or unprepared brain. The periganglionic lymph spaces frequently may be traced around the axiscylinder of the nerve processes. The lymph canals of each ganglion, are severally independent of, and free from connection with those of other cells.

On Blood-Letting in Dilatation of the Heart, with Obesity (*L'Union Médicale*, July 31st, 1888).—M. Courtade urges that in diseases of the heart attended with venous hypostasis, depletion is the proper treatment, and that the blood-letting should be abundant. While the blood flows of a dark blackish colour, thick, and unoxidised, the bleeding should be continued until the blood flows freely, thinner, and of a better colour. The fatty condition must be borne in mind, in order to explain how that the loss of blood may diminish the risk of myocarditis. This result is obtained by its effects upon the heart and vascular system. Thus the contractions of the heart are stronger, because (1) the obstacle presented by over-distension of the veins is removed, hence the heart can more readily regulate the circulation, the quantity of blood being diminished; (2) the heart will contract more forcibly, as there will be less carbonic acid and more oxygen in the blood. When arterial tension is weak and the venous strong, depletion will augment rather than diminish the arterial tension.

II.—NOTES FROM FRENCH JOURNALS.

By H. R. HATHERLY, M.R.C.S.

Laparotomy in Tubercular Peritonitis (*L'Union Médicale*).—Dr. R. Tizebicky has published a very interesting article on laparotomy in tubercular peritonitis. He has collected all the known cases to the number of fifty-four. Out of this number four patients died from the immediate effects of the operation; one died of acute miliary tuberculosis which supervened the day following surgical intervention; in another case death occurred, although no exudation was observed in the operation; another died from general tuberculosis without improvement in the peritonitis. In forty cases a cure of the peritoneal disease was obtained, but too often without arresting the progress of pulmonary disease. Most of the laparotomies were on women, a fact explained by errors of diagnosis, the attempts to remove a supposed ovarian tumour having revealed the true nature of the case. Considering the good results obtained by König, Hegar, Miculiez, and others, the author thinks that it is sometimes justifiable to abandon the expectant treatment sometimes acted upon. Even if a cure be not obtained, the dropsy, which is the cause of so much pain and uneasiness, is nearly always relieved, and the general condition is improved. Laparotomy is mostly indicated when the peritoneal symptoms are primary when the disease is not inherited, and when no other treatment is likely to be serviceable. After emptying the abdomen of the sero-purulent accumulation, some operators wash out the cavity with a solution of phenic acid, or of corrosive sublimate, and some dust the serous membrane with iodoform; whilst others adopt no antiseptic precautions. Some close the cavity completely; others leave a drainage-tube in the wound. Either method may be adopted, so far as the cure of the peritonitis is concerned, but it must be remembered that the drainage-tube leaves a fistulous opening, which is sometimes very difficult to heal.

Treatment of Aneurism of Aorta by Electrolysis (*L'Union Médicale*).—Dr. Spillmann reports a case of sacculated aneurism of the ascending portion of the arch of the aorta in which treatment by electrolysis was adopted as a last resource. The tumour was very large and superficial, the walls being extremely attenuated. The battery used was one of Shroeder's, to which three platinum needles with protected points were connected. The three needles were inserted into the tumour at a very little distance from each other, and attached to the positive pole in the hope of obtaining the formation of hard clots, and to avoid the production of gas. A current of the strength of twenty-five miliampères was applied for an hour. On the following day pain had disappeared; the tumour was much softer at the level of the application of the current, and expansion was much less marked. Three days afterwards a second application of the electric current was tried, the needles on this occasion being gilt; the positive pole was again used; strength, fifty miliampères; time, twenty minutes. During the sitting, pain was experienced at the point of application of the negative pole, which was replaced by one having a larger surface. The result of the second application was: diminution and softening of the tumour; less expansion movement; no pain. Five days afterwards a third and last application was made, with the same results. There was a decided improvement as the cumulative result of the three applications of the electric current, care being taken on each occasion to attack fresh portions of the tumour. Fifteen days after the last application, without appreciable cause, the tumour slightly increased in bulk, and the day following death took place suddenly. The *post-mortem* examination revealed a rent of the sac, but at a point where no electric current had been applied, and the escape of several pints of blood. In the aneurismal sac were found several hard fibrinous clots, corresponding with the different points to which the current had been applied, and in close proximity to the aortic orifice of the sac were stratified layers of blood clots, almost closing the opening; a fibrinous clot of considerable size occupied the centre of the tumour. The results may be considered encouraging, although death supervened, in spite of an operation undertaken when the rupture of the sac was absolutely impending. The amelioration of the symptoms during life, as well as the autopsy, are evidence of some improvement. Dr. Spillmann concludes that even in extreme cases electrolysis may be applied, if not for the cure of aneurism, at least for its palliative treatment, and it is justifiable to suppose that the treatment may, by the formation of solid clots, prove curative, provided the remedy is not applied too late.

Medical Instruments found at Pompeii (*Gazette de Gynécologie*).—Amongst the relics found at Pompeii may be seen urethral sounds for the practice of catheterism, which possess the double curve, usually considered the invention of Petit in the eighteenth century. There are also several specimens of specula for vaginal examination, with three or four blades, which are opened by an ingenious mechanism. Their chief defect consists in the thickness of the metallic blades. Several

trivale specula have been discovered, the blades being at a right angle to the rest of the instrument. One blade only is movable, the others being in a solid piece. When the instrument is closed it is little larger than an ordinary sized thumb. The blades are separated by a screw action, by which means a slow, regular, progressive, and very extensive dilatation may be obtained. On either side of the screw are two little jointed bars, to enable the medical man to hold the instrument with one hand, whilst turning the screw for dilatation with the other. The length of the instrument is 0.23 metres, and the maximum separation of the blades 0.09 metres. In the four-bladed speculum found in 1882 at the house known as the surgeons' house at Pompeii, the two inferior blades are moved by a screw. Its length is 0.315 metres. Another instrument is formed of two inter-crossed branches jointed to a fixed pivot, to which the name of pincer-forceps has been given. Each branch is formed of two parts, a handle and a spoon. The handles are roughened to render them less slippery in the hands of the operator. The handles are long in proportion to the spoons, which, after the principle of the lever, affords great power. The spoons are accurately adapted to each other, and curved at the sides to permit a better view of the operation. The extremities are grooved on the contiguous surfaces very accurately, so that the instruments allowed a very powerful grip. This instrument is supposed to have been used for the removal of sequestra of bone, but may also have been sometimes used as a cranioclast in difficult labours. It bears no relations of any kind to our modern midwifery forceps. Judging by the instruments, considerable attention must have been given to the treatment of the genito-urinary organs.

Dermoid Cyst in Douglas's Pouch cured by Intra-vaginal Puncture (*Gazette de Gynécologie*).—Dr. Neieloff, of Kieff, reports a case in which a dermoid cyst in Douglas's pouch was cured after a single puncture per vaginam. The result of the operation was slow to appear, as the substance required seven months in which to waste away. He admits that on general principles laparotomy is preferable, and that intra-vaginal puncture should only be adopted under exceptional circumstances. Sometimes a patient who will not consent to abdominal section readily agrees to puncture per vaginam.

Trephining for Epilepsy (*L'Union Médicale*).—Dr. Reclus has practised trephining for an injury to the head, which was followed by epilepsy. The fits were of daily occurrence, and were provoked by the slightest excitement. By the operation he was able to remove an exostosis, but the longitudinal sinus was opened. It was sutured and plugged, and in eight days union was complete; bleeding was controlled by the finger of an assistant when the sinus was opened. The epilepsy has completely disappeared. M. Trelat has also trephined in a similar case with an equally good result.

Typhoid Fever (*Lyon Medical*).—In a recent epidemic of typhoid fever at Bordeaux, the so-called classical remedies were tried, and out of 343 patients, ninety-three died, giving a mortality of twenty-four per cent. At the Hospital of the Red Cross during 1887, the systematic treatment by cold has been attended by three deaths out of sixty-one cases, or a mortality of only 4.91 per cent.

Prize for an Essay on the Hygiene of Infancy (*Revue Médico-Pharmaceutique*).—The Academy of Medicine of Paris offers a prize of a thousand francs, to be awarded in 1889, for the best essay on the Hygiene of Infancy—the special subject being "Growth, and its Influence on Disease."

Anatomical Amphitheatre in Paris (*Revue Médico-Pharmaceutique*). This is truly a palace; its entrance covers twelve thousand square yards, and it is the largest amphitheatre in the world. A thousand medical men would find ample accommodation.

Subcutaneous Injection of Caffeine (*Revue Médico-Pharmaceutique*). Dr. Huchard has obtained some excellent results from the hypodermic injection of caffeine which he employs as a general tonic, a cardiac tonic, and a diuretic. It is superior in its effects to the injection of ether, which is simply an excitant. Whenever in the pyrexia of acute diseases the heart's action becomes feeble, and there is a diminished secretion of urine, M. Huchard orders from three to five injections daily, each injection containing 0.20 to 0.25 grammes of caffeine. The following is his formula: Pure caffeine, two parts; benzoate of soda, three parts; distilled water, six parts. The solution to be made by heat. These injections are of great value in pneumonia and bronchial catarrh in aged people; also in the adynamic and cardio-vascular forms of typhoid fever.

A Wet Nurse Infected by a Child (*L'Union Médicale*).—The Ninth Correctional Court of Paris has recently given judgment against the parents of a child who had communicated syphilis to a wet nurse. Each parent was fined a hundred francs, and jointly to pay 2,000 francs damages. It had been proved that the parents were aware of the

condition of their infant. Under these circumstances the court compared the act to a blow or wound by misadventure. The judgment was to the effect that "By virtue of Art. 319 and 320 of the Penal Code respecting blows and wounds, which must be understood to provide against and punish acts which have a perfect analogy to blows and wounds, they were guilty of causing material injury by serious detriment to health, and by endangering life." It is worthy of note that under precisely similar circumstances in 1884 the same court pronounced an opposite judgment. It then decided "that involuntary communication to a third person, even through imprudence or negligence, of a contagious disease or organic virus causing death, was not forbidden by any penal law; the words, homicide, wounds, and blows inserted in Art. 319, 320 of the Penal Code, necessarily implying the idea of the violent action on the human body."

Lead Poisoning at Nexon (*Progrès Médical*).—A great many symptoms of poisoning have occurred recently in the communes of St. Victuriennien and Barre-de-Veyzac (department Haute Vienne) and the same symptoms have been noticed in another commune of the same department, that of Nexon. Twenty people have been attacked by severe colic, and the medical men who were consulted all concluded that the cases were due to lead poisoning. The law was put in motion, and a strict inquiry by a committee at St. Yrieix has elicited the following facts:—Each person attacked by colic was in the employ of the same baker; the baker provided himself with flour from one of the largest and best-known factors in the department, residing near Barre-de-Veyzac. It is supposed that the factor had mixed lead with his flour. It seems that lead has the property of giving to flour a fine appearance and whiteness, and allows inferior qualities of flour to be sold as of best quality.

Treatment of Thrush (*L'Union Médicale*).—Hirtz recommends the following as a local application in thrush: salicylate of soda (1 to 5 by weight) dissolved in distilled water. The buccal and pharyngeal mucous membrane should be mopped out five or six times a day with this solution in all cases of simple aphthous stomatitis. At the same time it is advisable to administer gentle laxatives.

III.—NOTES FROM RUSSIAN, POLISH, AND SWISS JOURNALS.

By VALERIUS IDELSON, M.D., BERNE.

Salicylic Acid in Malignant Scarlatina.—Dr. A. Shakhovsky emphatically recommends (*Novosti Terapii*, No. 6, 1888, p. 208) the salicylic treatment of scarlet fever, the recommendation being supported by 125 malignant cases of the disease, with only three deaths. He always employs the following formula:—R. Acid; salicylic; gr. xv.; aq. distill. ferdid., 3 j.; syrup. aurantior, 3 j.; M.S. From a teaspoonful to a tablespoonful every hour during the day time, and every two hours by nights. The solution of the acid is said to be perfect, as well as palatable. In about two or three days the patient's temperature falls from 41°C. down to 38.5° or 38°C., reaching 36.5°C. about the tenth day of the treatment. To prevent any relapse (of fever and all) the mixture must be administered every two hours for two or three days after the defervescence. Dr. Shakhovsky assures that salicylic acid, when administered after his plan, successfully prevents all complications (such as uræmia, dropsy, diphtheroid anginas, lymphadenitis, etc.), and even rapidly removes them when they are present. The salicylic treatment fails, according to his experience, only (1) when it is resorted to too late (later than a fourth day of the disease of a malignant form), and (2) when there are simultaneously present certain severe chronic diseases or serious congenital defects.

Hydrastis Canadensis in Uterine Hæmorrhage.—In the Polish weekly *Gazeta Lekarska*, No. 19, 1888, Dr. Arnstein publishes a paper on the hæmostatic effects of hydrastis canadensis, which is curiously at variance with almost unanimous favourable statements of other writers on the same subject. He administered fluid extract of the plant, from twenty to twenty-five drops, three or four times daily, for many successive days, sometimes even for several months: (1) in profuse menorrhagia of young women; (2) in metrorrhagia depending upon uterine fibromyomata; (3) in that from uterine polypus; (4) in flooding accompanying abortions; and (5) in uterine bleeding caused by subinvolution of the womb after miscarriage or labour. The results were utterly disappointing in all the five categories. Dr. Arnstein's general conclusion is to the effect that the drug manifests a but very trifling influence on uterine hæmorrhage, and, as regards its hæmostatic action, stands by far lower than preparations of ergot. [One cannot help thinking that Dr. Arnstein has been using some bad preparations of hydrastis. In the same *Gazeta Lekarska*, No. 12, 1888, another Polish practitioner, Dr. W. Senkowski writes that he most successfully treats various forms of menorrhagia (such as

caused by subinvolution of the uterus, hæmorrhagic endometritis, climacteric changes, etc.) by the internal use of fluid extract of hydrastis, from fifteen to twenty drops, three or four times daily. In the *Prager Medicinische Wochenschrift*, No. 52, 1887, Dr. V. Schmidt records a striking case of obstinate floodings in connection with an enormous uterine fibroid, where the administration of the extract, twenty-five drops four times a day, was immediately followed by a complete stoppage of the bleeding, while, by the end of three and a half months, even a considerable decrease of the tumour could be obtained by the use of the same remedy in smaller doses. In the *British Medical Journal*, July 21st, 1888, p. 123, Dr. H. T. Rutherford publishes five (scarcely less striking) cases of metrorrhagia, caused by uterine fibro-myomata, and cured by tincture of hydrastis, in the dose varying from fifteen minims to one drachm.—*Reporter*.]

Case of Opium Poisoning.—At a meeting of the Medicinische Gesellschaft in Basel, Dr. Widmer related (*Correspondenz-Blatt fuer Schweizer Aerzte*, August 1st, 1888, p. 472) a singular case of acute poisoning by opium. A woman, æt. forty-seven, suffering from some uterine affection, swallowed the mixture, consisting of fifteen grammes of simple tincture of opium (*Ph. Germ.*), fifteen grammes of tincture of valerian, and fifty grammes of fluid extract of hydrastis canadensis. When called two hours later, Dr. Widmer at once proceeded with washing out her stomach with ten litres of a two per cent. solution of tannic acid. A striking improvement and recovery rapidly followed. The author believes that such successful an issue of the case is to be attributed partly to a fairly early and rational treatment, but partly to the action of hydrastis, which has caused a powerful contraction of the gastric and intestinal blood-vessels, and, consequently, greatly interfered with the absorption of opium into the patient's system.

Urethrorrhaphy.—Professor Socin, the distinguished surgeon of Basel, publishes (*Correspondenz-Blatt fuer Schweizer Aerzte*, August 1st, 1888, p. 471) two cases of traumatic rupture of the bulbous portion of the urethra in two male patients, æt. forty and fourteen, where, shortly after the accident (a fall astride), he has successfully sutured the urethral laceration, the channel retaining its normal permeability. In the first patient, however, for some time after the operation, there was present a difficulty on micturition. On the endoscopic examination a thread (suture) was found, and extracted on the spot. The boy was able to quite freely pass water in a couple of days after the urethrorrhaphy. In both of them the injured superficial soft parts had been left unsutured, the wound having been simply filled up with gauze. In a third patient, æt. eleven, both the urethral and superficial wounds were stitched together. The former healed with the formation of a stricture. A year later Professor Socin excised the stenosed portion, and applied a circular suture. Not a trace of any stricture can be detected at present.

Spontaneous Fulminant Gangrene of Scrotum and Sheath of Penis.—In the *Revue Médicale de la Suisse Romande*, No. 4, 1888, p. 219, Professor Oltramare, of Geneva, describes a typical instance of an idiopathic fulminant sloughing (*gangrène foudroyante*) of the scrotum and the penis's sheath in a coal merchant, aged thirty-seven—a robust man enjoying excellent general health, in spite of his habitual alcohol excesses (with repeated attacks of *delirium tremens* during the last five years). One fine summer (July) evening, having imbibed a considerable quantity of “spirits of all kinds and sorts (*alcool sous toutes ses formes*),” the gentleman returned home with complaints about general lassitude, drowsiness, and a severe lumbar pain. In the course of a sleepless night his attention was drawn to his penis being tumefied, hot, and slightly tender. On the next morning, his wife discovered a brown violet patch on the dorsal aspect of the sheath of his penis. On the examination about forty-eight hours after the first symptoms, Professor Oltramare found the man's member greatly swollen, the scrotum being as large as a fetal head; the gangrenous process of the penis's sheath reached backwards nearly the organ's root, while the scrotal integuments remained yet only highly congested and tender. The glans, urethra, and testicles were normal (except some tenderness of the latter, and especially along the spermatic cords). On the third day of the disease there appeared a violet patch about the scrotal raphe, which in the course of the fourth and fifth days gradually spread over the three-quarters of the scrotum. From the sixth day the dead portions of the integuments commenced to rapidly fall off in the shape of large floes and stripes, leaving a red, rough, suppurating, and easily bleeding surface. It became now obvious that the sloughing process had been limited only to the skin and subcutaneous cellular tissue. A steady healthy cicatrization set in. About the forty-fifth day the patient could already go out, wearing a suspensory. There were all grounds to believe that “no very considerable deformity will result;” the erections were effective and painless. The man's general state remained good all through. Neither were fever, albuminuria, or glycosuria present at

any stage of the case. Dr. Oltramare mentions similar cases published by Fournier, Folet, Demarquay, Jalaguier, Lallemand, Bonnière, and Leloir.

Bacteriology of Diphtheria.—At a meeting of the Société Médicale de Genève, Dr. D'Espine, of Geneva, read an important paper (*Revue Médicale de la Suisse Romande*, No. 1, 1888, p. 49) on his extensive bacteriological researches concerning Loeffler's bacillus of diphtheria. The author does not entertain any doubt that the bacterium in question represents the pathogenic microbe both of diphtheria and croup, and furnishes the most reliable means for establishing a differential diagnosis between diphtheritic or croupous anginas, and lacunary, diphtheroid, herpetic, and other “simple” anginas associated with whitish deposits about the throat. The micro-organism was absolutely absent in twenty-four cases of simple anginas examined by Dr. D'Espine, while it was present in every one of fourteen cases of diphtheria and croup. Hence, the author emphatically insists on the necessity of a bacterioscopic examination of false membranes in all doubtful cases. The procedure is said to require less time than a bacteriological examination of the sputum in cases of pulmonary tuberculosis. It is advisable to repeat the examination several times, and to verify the results obtained from a simple colouration (with fuchsine, gentiana-violet, etc.) by means of Gram's method, which, while leaving intact the stained diphtheritic rods, decolourises some other microbes resembling the former. Loeffler's rods, as found in false membranes, are thicker or “better nourished (*mieux nourris*)” than those obtained by cultivation. The bacterium has the shape of slightly curved “small sausages (*petits saucissons*)” whose length is almost equal to that of the tubercle rods, while thickness is at least twice larger than that of the latter. Dr. D'Espine and Picot always thought that diphtheria and croup were essentially identical affections, Loeffler's discovery finally settling the question. In a case of so-called “idiopathic” croup of the larynx in a child, where any faucial complications had been absent, and tracheotomy successfully performed, Dr. D'Espine obtained a “pure culture” of the microbe from a false membrane, which preserved its virulent or pathogenic powers through twenty-five generations, as the inoculation experiments on rabbits and guinea-pigs proved. A fifteenth generation having been forwarded to Dr. Loeffler, the latter at once recognised a complete identity of the croupous microbe with his *bacillus diphtherie*. In common with his German colleague, Dr. D'Espine believes that the micro-organism produces locally a leucomaine which is resorbed into the patient's blood, and thus gives rise to a general poisoning of the system.

IV.—SELECTIONS FROM SPANISH AND OTHER CONTINENTAL MEDICAL JOURNALS.

By G. F. CADOGAN-MASTERMAN, M.D.

Antipyrin in the Treatment of After-pains. Dr. Rivière (*Gazette Hebdomadaire des Sciences Médicales*).—The communications of M. Germain Sée to the Academy of Sciences in April and September, 1887, on the analgesic properties of antipyrin, in which he dwelt upon its remarkable power as a cerebro-spinal sedative to relieve pain, or rather to dull the sensibility to suffering, induced the author to try its effects for lessening the distressing uterine pains which so often follow rapid delivery. His first essay was made with three private patients, and with them it succeeded so well that he obtained permission to experiment with it on a larger scale in the lying-in wards of Professor Moussous. Between the 19th of September, 1887, and the following 16th of June, the remedy was given in twenty-eight cases, with very satisfactory results. Each case is reported with some detail, but they are very similar in cause, treatment, and conclusions. In each, one gramme of antipyrin was given as soon as pain was complained of, and a second gramme at the end of an hour; in the greater number no more was needed, the patient either fell asleep or felt quite easy, but in others three, and in two instances up to six doses had to be given before the uterus became painless. The cases in which the relief was most marked, and immediate were those with a rigidly almost tetanically contracted uterus with intense pain, and with these rarely more than two doses were needed to obtain complete relief. In the greater number there had been rapid natural delivery, in two only had ergot been given, and none were instrumental cases. It is instructive to notice that in several, and invariably in the most obstinate, it is recorded that the lochia were offensive, and that injections brought away more or less decomposed placental and membranous debris or putrid clots. In other words, that the suffering was due to that very common cause—neglect in the third stage of labour. If the Dublin method be carefully followed, the placenta expressed at an early period, every trace of membrane cautiously drawn away, and the emptying of the uterus and vagina of all clots made certain by digital exploration, and then a good bandage properly applied, after-pains are very rarely complained of.

But it is very useful to have so excellent an analgesic as antipyrin at hand, especially as, unlike opium, it prevents pain being felt without interference with the uterine contractions. "In every case when the hand was placed over the uterine globe to make sure of the permanence of its contraction, it was easily shown that the 'pains' were neither less frequent nor less powerful, but that they had ceased to be distressing." It should not be forgotten, however, that after-pains have their value as a most significant intimation, that there is generally something within the uterus which ought to come away, and which that organ is painfully trying to expel, and, therefore, that passing the exploring finger should usually precede, if not remove the necessity for, the medicine. The milk was tested in several of the cases (with perchloride of iron, which gives a brown colour in the presence of antipyrin) to ascertain if any of the drug passed therewith, but with negative results. In the urine its existence was easily and invariably detected.

What is a Spoonful? V. Laporte (*Journal de Médecine de Paris*).—The exact dosage of medicines is one of the anxious considerations of the practitioner, especially when prescribing active therapeutical agents; and the due proportioning of the dose according to the stage of the disease, the age of the patient, and the results hoped to be obtained are scarcely less important than the selection of drugs to be given. But between the dispensing of that prescription and the taking of the medicine there is a whole abyss of uncertainty and possible mistakes; and the more so from the conventional use of measures which have no reference to any authorised standard in capacity, nor definition as to what constitutes the filling of them. The table and the teaspoon—to which we alone have added the complication of the dessertspoon—constitute the all but universal scale of measure for the taking of medicine; and how wide, elastic, and, therefore, uncertain that scale is the author points out. The tablespoon varies greatly in size according to its material, date and country; our own has increased quite twenty-five per cent. in size since the beginning of the present century, and amongst those of recent manufacture the silver is smaller than its showy rival in electro-plate. But the great difference, and an enormous one, is that in the opinion as to what constitutes the filling of the spoon: should the liquid contents be level with the margin or be poured in to plenitude? The French tablespoon (*cuiller à soupe*) holds in the first case sixteen cub. cent.; in the second, twenty cub. cent.; the teaspoon—or as it is there called a coffeespoon—is either two cub. cent. or five cub. cent. This I find is the capacity of a tablespoon of the fourth year of George III., but in one of recent make I could with a steady hand run 27.5 cub. cent. from a burette, and 28.5 cub. cent. when supported, without overflow; in other words, exactly double the quantity it is estimated to contain.

For, in measuring medicines, we assume that a tablespoonful is half an ounce; the dessertspoonful three fluid drachms; and a teaspoonful one fluid drachm. I find, however, that using modern English spoons the capacity of each is

	Level.	Over-filled.
Tablespoon	f 3 v.	f 3 i.
Dessertspoon	f 3 iiss.	f 3 ivss.
Teaspoon	f 3 iss.	f 3 jss.

Now this is a very serious discrepancy and may lead to very unexpected results. A patient who should have taken an ounce of a mixture may have taken any quantity between ten drachms and two ounces. It is, therefore, a question of some moment whether spoons as measures of dosage should not be abolished altogether, and prescribers either direct a fractional part of the bottleful to be taken, a sixth, eighth, or sixteenth, which is the better plan, as we cannot expect all our patients to be provided with glass measures, or else order so many fluid drams which would involve the use of one. In connection with this question, as it is so general a custom to direct medicine to be taken three times a day, would it not be better to have the ordinary eight ounce bottle divided by the usual raised lines into nine and eighteen parts?

A Remarkable Case of Oto-rhino-laryngopathy. Dr. D. Pedro Verdós (*Revista de Ciencias Médicas*).—Early in the present year a patient consulted the author in reference to increasing deafness, about which he could tell very little and was extremely reticent in other respects. He was a man of some fifty years and of feeble constitution, and his appearance was singular from a large fleshy growth projecting from his distended nostrils, and the fact that he was obliged to keep his mouth open in order to breathe. This growth naturally attracted the doctor's attention, but the patient was most anxious to turn the conversation to the subject of his deafness, and it was only after he had been convinced that there was a very probable connection between the two that he would give his reasons, and these very reluctantly, for trying to escape the former subject. It seems he first noticed some obstruction in the nose twenty-three years before, and consulted a surgeon, who diagnosed polypus and tried to remove it. He was,

however, either singularly inexpert or most unfortunate, for, in a series of operations, he inflicted a terrible amount of suffering, and left the patient no better than when he began. The latter then vowed by all the saints that no doctor should ever interfere with his nose again as long as he lived, and hence his resistance. However, Dr. Verdós persuaded him to submit, and he found on tactile and rhinoscopic examination that an enormous growth filled both nostrils and projected backward into the pharynx, and so firmly that it was impossible to pass the smallest probe beside it. The nose itself was greatly enlarged and disfigured, and all sense of smell had entirely disappeared. The walls of the pharynx were swollen and inflamed, and covered by a tenacious secretion which the man got rid of by spitting incessantly. The ears were filled with a most offensive purulent discharge, and deafness was almost complete. After syringing it was seen that both tympani were not merely pierced but more than half destroyed, and that from the middle chamber a pale pink growth projected, evidently of the same character as that which filled the nares. The tolerance of the latter was very singular, in spite of the excessive development of the neoplasm there was none of the destructive ulceration and necrosis a much smaller polypus often sets up in a short time, one could hardly believe that for more than twenty years it had existed and grown there. Its removal necessitated many sittings and much patience, both on part of the operator and the host, but, thanks to cocaine, the tearing away piecemeal of the polypus was accomplished without pain and without the need for any external incisions. When at length the nostrils were free, eustachian catheterism was practised, and iodine and stimulant balsamic vapours were injected, both through the tubes and the external auditory canals. Under this treatment the growths were gradually removed—in quantity almost incredible—both from the nares and the ears; the discharges soon ceased, the throat became healthy, even the tympani healed, and when last seen the patient could hear the ticking of a pocket *remontoir* at the distance of eight centimètres.

An Incident in a Case of Tracheotomy. Dr. A. Bassols Prim (*Idem*).—A little girl, æt. six, suffering from diphtheria, passed rapidly into the stage where medicine ceases to be of use, and the only hope of success lies in operative measures. There was considerable delay in gaining the consent of the relatives, and when the surgeons, Dr. Nunell and the author entered the room the child seemed to be already beyond all human help; it was promptly decided, however, that tracheotomy should be performed, and it was carried out without difficulty. But on opening the trachea, instead of the usual welcome sound of the entering air, all respiratory movements had ceased, and the tube was seen to be filled with a semi-solid magma which rendered the entrance of air impossible. Without a moment's hesitation, however, the operator incised the lower rings and pushed the canula in until it nearly reached the point of bifurcation of the trachea, and initiated vigorous artificial respiration by the method of abdominal massage. The bystanders, at the same time, were directed to briskly rub the limbs and over the heart which had apparently ceased to beat. An order which had to be repeated several times, for they were so terrified at the aspect of the patient, that it was difficult to keep them at their posts. However, after an interval which seemed interminable, the little one began to make expiratory movements, expelling a plug of tough mucus, and the careful passing of a wire brush soon cleared the rest away, which was followed by a quantity of thin phlegm such as characterises bronchial catarrh. The child would seem to have been suffering from the latter diseases when diphtheria set in, and the abundant secretion had filled the narrow opening the false membrane had left in the larynx. The patient made an excellent and speedy recovery.

Animal and Human Vaccination. Dr. Maestro (*A Medicina Contemporanea*, Lisbon).—The great success which has attended the opening of the *Parque Vaccinogenico* (the Government Calf Lymph Establishment), and its work since, lies in the fact that it has done so much to clear away popular prejudices regarding vaccination, which are fast disappearing. One occasionally hears, however, that the resulting feverishness has exceeded its usual gentle limits, or that erythema, or, but much more rarely, that erysipelas, has appeared around the pustules and in neglected cases passed on to axillary abscess, and any skin eruption which may succeed vaccination is sure to be put down to it. Now, the life of a very young child may be said to be one of instable equilibrium, and the profound constitution disturbance of vaccinia may bring to the surface skin affections, which may be latent in the system, or even set them up *de novo*, and we must not forget that the open surfaces of the broken vesicles, which may remain patent and moist for several days, offer an unusually tempting nidus for any germs to nestle in. When using calf lymph the operator is free from anxiety as to the transmission of syphilis, which is the chief poison we have to dread; but when human lymph is employed, we cannot be too scrupulous and careful, not only in selecting the vaccifers,

but in conducting the vaccination in such a way as to avoid alarming or even ruffling the jealous maternal instinct of the nurse. The directions given to the public vaccinators in England leave little to the judgment of the operator, but it is amusing enough to notice how in one point they preserve the traditions of a long-passed age. Of old the blood was a deep red liquid, which had as much individuality as the owner—one was almost surprised to find that that of a Spanish grandee of the first-class was not literally "blue," but of the same colour as other people's—the idea of a colourless fluid loaded with red cells, is one still beyond popular comprehension, and that it is in this colourless part that all its constitutional properties, its power for good or evil, reside, and in which disease germs live and multiply, and are carried to one's children and vaccinees, is still more so. But in these antiquated directions, beyond some general directions as to the selection of the children, it is only the transmission of this red blood which is to be scrupulously guarded against. The clear lymph, which may contain millions of murderous disease germs, may be taken without hesitation, but a single red cell—which is absolutely free from them—is to be shunned as a pestilence! However, this is erring on the right side; if the vaccination can be performed without the appearance of a drop of blood so much the better, and for outraged prejudices' sake it is better that the lancet, which conveys the lymph, should be unstained by it also. The author refers to two practical points in reference to the operation, and the prevention of unpleasant after effects. If the lymph, in place of being transferred direct from arm to arm, be collected in one of the usual tubes, blown on to a slip of glass and mixed with half as much glycerine, and then applied to the most superficial scratch, *it never fails to take*. The most frequent cause of non-success being the drying of the lymph before it has had time to be absorbed, which the glycerine prevents. The other is, to given the infant two drops of the tincture of the perchloride of iron three times a day, in a little syrup, as soon as the vesicles have matured. If this be done for three or four days local inflammation very quickly disappears, and even if erysipelas has set in, it will certainly cure it. It is well to lightly touch the emptied vesicles with elastic collodion, and cover with a thin layer of cotton wool.

V.—NOTES FROM EGYPT.

An Instructive Study for the Alexandria Quarantine Board, and a Cause for Congratulation to the Egyptian Sanitary Department. The "Shifa" an Explanation.—As a comfortable but delusive impression seems to be spreading with regard to the sanitary condition of India and Calcutta, it may be well to direct attention to the actual state of affairs. It is impossible to speak of the filthy state of the broad fringe of hamlets by which Calcutta is surrounded without using forms of expression that must seem exaggerated when judged by the ordinary standard. But the fact is, there is no possibility of exaggerating, either the horrors of the hamlet world, or the manifold dangers by which, owing to the lethargy of the Local Government, the city of Calcutta is encircled. Far from matters being improved, they are growing rapidly worse, the only effect of the trivial action into which the municipality has been goaded is to create a false feeling of security in certain quarters. That there will be a terrible awakening some of these days is the conviction of everyone who has the slightest acquaintance with the subject, and who brings to it an unprejudiced mind. For some years past Calcutta has been fortunate in escaping one of those visitations which strike terror into the public mind, and reassert the devastating power of epidemic disease; but a peep at the hamlets will amply prove the folly of believing that the present immunity is likely to be more than shortlived, for nothing has been done in the way of prevention that is worth one moment's consideration." It has just come to our knowledge that during the first week of December, 1887, a gentleman, of Calcutta, visited one of these hamlets in the suburb of the city, and his description of its unsanitary condition was considered worthy of a place in the March number of the *Journal of the Health Society for Calcutta and suburbs*. We have thought that by publishing a *resumé* of what he reported, our eyes might be sufficiently opened to the risks we run by being next door neighbours, and that we might be on our guard against the importation of communicable diseases.

He says: "I went to the hamlet called Kurryah, and it is conveying a very feeble idea of what I saw, to say that the condition of the people is simply frightful. Here we have a group of closely-built huts crowded with people. The land on the south side, not twenty yards distant, is used for curing skins. It is needless to say that the stench is sickening, and that the air is thoroughly saturated with it. The whole area, including a number of foul places, drains into what seems to be a blind ditch, but which is more accurately described as a bubbling scum-covered seething mass of utter corruption. A few huts separate the ditch from two tanks, one of which was covered with green scum, and was used for bathing and for washing utensils,

clothes, etc. This tank is separated from a second to the east of it by a 'bund' (dike) of about five feet thick, not thick enough, however, to prevent percolation, the water in these two adjoining tanks is at the same level, percolation evidently taking place freely. The water in the second tank is free from vegetable scum, and is not clear water, but abounds with low forms of life. On my visit to this delightful spot, I had a companion with me, and the object of our search was to discover the sanitary conditions in the midst of which a recent and fatal case of cholera had its origin. The people in the neighbourhood used the second of the tanks for their water supply." Further, we ascertained that from thirty to forty cases of cholera had occurred in the vicinity every year. "We had the tank water microscopically examined, and it was found to be teeming with life. Perhaps the worst feature was that the forms of low organisms, which are to be found in fairly pure water, were conspicuously absent. Under these circumstances the mystery is not that there is illness about the place, but that anyone can live there in ordinary health, even for a few weeks. Now I wish to lay stress upon the fact that there is not a word of this statement exaggerated. The picture is far from being over-coloured. The hamlet here described is a real every-day aggregation of huts not worse than hundreds of others. It is a thoroughly typical hamlet in all its wretched features—an ever active centre for the propagation of the most dangerous forms of disease that threaten the health of a vast European and native community. What I would ask is, will the municipality realise that its paramount duty is the removal of such plague spots? When will it begin in earnest to remove the evils which exist at our doors, and threaten the public health at every moment? The fact I am most anxious to emphasize is, that in spite of all that has been said, and even of the remonstrances of the Supreme Government, the Municipality has practically done nothing to mitigate the unsanitary conditions of the city, or to remove the reproach which is attracting to Calcutta the attention of European authorities on sanitary matters."

We say the above is an instructive study for the Quarantine Board at Alexandria, because the narrative is by an eye witness, and is not a telegraphic despatch. We shall give, in our next article, an account of a cholera-stricken village in the suburbs of Calcutta, in which the authorities cloaked the truth, so that it is not known in its naked form to the outside world. The Egyptian Sanitary Department may well congratulate itself that there is at least one other country in a worse sanitary condition than Egypt, but this is no reason why it should rest and be thankful.

In Cairo we are having just now a mortality of eighty per thousand; who knows what it may be in the villages, where stinking pestilential ponds serve for the water supply to man and beast at low Nile? We consider that the mortality of the inhabitants during the summer months would diminish one half at least, if the people were furnished with a pure water supply, and we cannot conceive of anything more feasible and inexpensive than the old system of storing the high Nile water, to be used during the period when the *Laboratoire Khedivial* will tell us, that the Nile water teems with disease germs! This period we judge from experience, without any microscopic research, lasts from two and a half to three months. In Cairo, no doubt the water company would, for a consideration, fill the 300 existing cisterns at the proper time, and as for the villages, each village could make its own cisterns, and maintain them.

In another article we hope to enter more fully on this subject; in the meantime we assert that low Nile water, however well filtered, is not potable water, and its use as such leaves no doubt in our mind as to its influence on the demographic statistics. Low Nile is little better than an open sewer. By boiling it, no doubt many of the pathogenic germs are destroyed, but, for one who will boil his drinking water, there are thousands who won't. Hence we are driven back to the time honoured cistern system, which will, of course, be under the superintendence of the Public Works Department. We were glad to find that many of the old cisterns have not been destroyed. We hope that it will not militate against our suggestions that we are shareholders in the Water Company.

I must ask you to allow me space for a personal explanation, though the matter rises far above personality. We have to depend on such journals as yours for exposing the truth about Egyptian sanitary matters, and still more we have to depend on professional sympathy at home to encourage us in our uphill work. My statements to you have been challenged. Journalism in the East is very different from journalism at home. Dr. Schmeil's patriotism deserved a better fate, and the history of his venture may not be without interest to English readers. I set down "naught in malice." The main facts are these:—

1. About the end of 1885 Dr. Schmeil conceived the plan of editing an Arabic medical journal to fill up a felt lacuna in the medical education of the Orient (where we have three medical schools—two in Syria and one in Egypt, and all without a medical journal).

2. Such a project could only succeed by getting Government aid. Greene Pasha favoured the project, and undertook to subscribe for 120 copies (120 napoleons a year); these copies to be distributed amongst his sanitary doctors throughout the country.

3. Dr. Schmeil now asked permission from the Government to print his journal. He was astonished to find that instead of the Government being delighted to have such a medium of education started, they made a great "fityfying" about it, and at last granted the permission as a great favour.

4. Dr. Schmeil called his journal "*Al Shifa*" (the remedy), and it made its appearance on the 15th February, 1886.

5. It had not appeared many months before the native medical men were stirred up with jealousy, more especially those in the Government service, as no doubt they felt that it was a duty they should have fulfilled, but which they did not. This jealousy might have turned out to be a healthy seed, leading on to having healthy fruit, but instead of that it was made to militate against the *Shifa*; and it was so far unfortunate at this time that a change in the sanitary department took place.

6. Towards the end of the *Shifa*'s first year Dr. Schmeil, finding that it was not at all remunerative to him, applied to the Government authorities for more pecuniary aid. Dr. Schmeil exposed the position first to the Sanitary Director, who promised to do all he could, but he feared the minister would cry that there was no money.

Dr. Schmeil now went to the Ministry of Public Instruction, where he was very sharply told by the Sub-Minister that he had no money, and besides, he said, "there is a school of medicine, and that suffices."

The Sanitary Director did not succeed with the Minister of the Interior, but his department continued to take the 120 copies.

7. In the first number of the *Shifa*'s second year (February, 1887), appeared an article by Dr. Grant-Bey, on the Egyptian midwives. In this article there was nothing against the Sanitary Department, so that no objection was raised to the article at this time.

8. About the 10th or 12th March, 1887, Dr. Schmeil sent his account by a collector to the Sanitary Department to draw the 120 napoleons. The director was there, and also his sub-director. The sub-director said, "We do not wish to be subscribers, therefore we do not wish to pay." The *encaisseur* then said, "Why did you not say so before?" Half instead of the whole sum was then offered. The *encaisseur* said he must have the whole or none, and in the latter case that they would have to go to the tribunals. This made them decide to pay up, but they wrote a letter to Dr. Schmeil that they would not be subscribers for 1888-9.

9. When Greene Pasha read Dr. Grant-Bey's article in the April number (1887) of the *Provincial Medical Journal* on the Egyptian midwives, which was simply a reproduction of what was printed in the *Shifa* of February, but more especially when he read "Notes from Egypt" (which were not in the *Shifa* at all), in the May number of the same journal, he became furious, and wrote that extraordinary letter against Dr. Grant-Bey and against the *Shifa* in the July number of the *Provincial Medical Journal*. Be it observed that all this time Greene Pasha thought "Notes from Egypt" were a rescript from the *Shifa*; but that was not the case. His subordinates, however, translated to him Dr. Grant-Bey's article on Egyptian midwives in such a way as to stir up Greene Pasha's ire against the *Shifa*, as he now posed himself as the champion of the Medical School, over which he has not the slightest control, seeing that it does not belong to his department. Dr. Schmeil having seen by the *Provincial Medical Journal* that the *Shifa* was accused by Greene Pasha of publishing libels, went to him to have this corrected, and caused the sub-director to translate the article from the *Shifa*. The sub-director said yes—no—, that is, he hesitated to say either the one way or the other. At a second interview Greene Pasha persisted in accusing the *Shifa*, so Dr. Schmeil retired, saying the *Shifa* could defend itself. Now came the tug of war.

10. Greene Pasha, his sub-director, and one of the sanitary employées, also a professor at the School of medicine, set about creating another medical journal, which they called the *Saha* (Health), and although the Sanitary Department could not augment the subscriptions to the *Shifa* it immediately found 120 napoleons for the *Saha*, and the subminister of public instruction, who told Schmeil that he had no money for the *Shifa*, and that the medical school was sufficient without any medical journal, speedily found fifty napoleons for the *Saha*. Besides all this, an official circular was sent round to all the administrations and schools asking them to support the *Saha*, which correctly meant not to support the *Shifa*. Since then the sanitary medical men have been boycotted. Listen to an actual conversation. High Sanitary Official to a subordinate from the provinces; Do you take the *Saha*? Sub; No; I take the *Shifa*. High San. Off.; Why? Sub.; Because I find I can learn something from it. High San. Off.; But you should take the *Saha*. Sub.; I have no money to subscribe for both. This subordinate had the *Saha* sent to him from the central department *gratis*.

11. Doctor Schmeil, according to promise, defended the *Shifa* against the sanitary attack in an article entitled—"The *Shifa*, Grant-Bey, and Greene Pasha." This produced a correspondence between Greene Pasha and Dr. Schmeil, which disclosed the fact that the Minister of the Interior, on the recommendation of the Sanitary Department, had given authority to this department to continue the subscriptions to the *Shifa* for the year 1888-89. This letter of authorization was kept secret at the Sanitary Department, and never communicated to Dr. Schmeil, but some time after Greene Pasha addressed a letter to Dr. Schmeil, telling him to continue sending his journal after the expiration of the subscriptions for the year 1887-88, *i.e.*, for the year 1888-89 at least. When the subscriptions for 1888-89 were refused, then Dr. Schmeil entered upon his legal rights, and gained his case, both in the first court and in the Court of Appeal.

12. I now wish the editor of the *Provincial Medical Journal* to adjudicate upon this evidence whether I was guilty of an inaccuracy when I wrote that the *Shifa* had been rewarded by the Government Authorities by withdrawing the subscriptions from it, and by lavishing them on the *Shifa*'s child (*Al Saha*).

NOTE.—The medical journal, *Al Saha*—otherwise called "The Sanitary Department Journal," by Greene Pasha, in his correspondence with the editor of the *Provincial Medical Journal*—has appeared for the month of September without the names of the members of its editorial committee, which up till now found a conspicuous place on its cover, with Greene Pasha as president. There is no mention now but of the two principal editors. We know, moreover, that the Sanitary Department has sent a circular to all the sanitary doctors, informing them that the medical journal, *Al Saha*, has no longer any connection with the Sanitary Department. *Sic transit gloria mundi*. Both parties are equally reticent as to the cause of this reciprocal severance of such an intimate connection, and before effecting the original object of the journal. We believe that the motives are of the same kind as those that created this publication. We shall not, therefore, be at all astonished to find in the near future another Arabic medical journal springing up under the fostering care of the Sanitary Department, but with the inevitable result of massacring all the three, and of raising on their remains a glorious monument to the honour of our Sanitary Department. For, be it known, there is no room here but for one Arabic medical journal, and even that must be supported by the Government in order to surmount the evil influences of an Oriental atmosphere. Lord Derby said quite recently that the best service political men can render to science, when they do not wish to aid it, is to let it alone, and not bar its progress by their opposition, which can only corrupt it. We quite agree with the noble and learned Lord's sentiment, for we have witnessed the truth of his assertion.

Native Court of Appeal. Dr. Schibly Schmeil, M.D., versus The Egyptian Sanitary Department, and vice-versa.—Doctor S. Schmeil having brought an action against the Sanitary Department, before the court for petty claims, demanding that the said Sanitary Department should be condemned to pay him the sum of 120 Napoleons as damages for having stopped 120 subscriptions to his medical journal, *Al Shifa*, for the year 1888. And the said court for petty claims awarded, on the 3rd of June, 1888, the above-mentioned doctor, against the said department, forty Napoleons in gold, condemning it to all expenses, with interest at seven per cent. per annum, from the time of making the claim, by way of justice until payment is made, with 100 piastres (£1) attorney's fees, rejecting all other claims. On the 28th June last, Dr. S. Schmeil, by his lawyer Emeen Schmeil, presented to this court an appeal against the said verdict, demanding the issuing of an order to H. R. Greene Pasha, in his quality of president to the said Sanitary Department, summoning him to come before this court and hear the sentence of abrogating the said verdict of the court for petty claims, and condemning him to the full payment of 9258 P. T., value of the 120 Napoleons, with expenses and lawyer's fees. At the same time, Ahmed Effendi Fathy, representing the Contentment Department for Home Affairs (acting for Greene Pasha, president of the Sanitary Department), presented an appeal also against the said verdict, asking the abrogation thereof and the rejection of Dr. Schmeil's claims, condemning him to all expenses. At the sitting of the court on July 24th, Emin Effendi Schmeil, lawyer for Dr. S. Schmeil, and Ahmed Effendi Fathy, lawyer for the Sanitary Department, appeared and pleaded to join both appeals, and decide jointly thereupon, both of them insisting on their claims mentioned in their petitions to the court. The court, after examining the papers and listening to the verbal pleading of both parties, and after discussing the question according to the law, decided as follows:—

Whereas, both appeals of Dr. S. Schmeil and of the Sanitary Department were made in due time according to the law. And whereas each one of them is materially connected with the other as to have the court's approval of being joined together, and decision be given on them

both as one. Whereas, it is proved from both parties' assertions, and from the documents presented by them, that the Sanitary Department had subscribed to the *Shifa* for the year ending the 15th February, 1888, and that on the 14th of March, 1887, it had informed Dr. Schmeil by letter of their desire not to continue the subscription after the above date. Whereas, to decide the dispute between the two parties, the court thought it necessary to consider the following points: 1. Whether the Sanitary Department had or had not really bound itself to Dr. Schmeil for subscribing to the *Shifa* for another period besides the one that finished 15th February, 1888. 2. Whether the said Sanitary Department had or had not broken its engagement without the consent of Dr. Schmeil. 3. Whether by this conduct the Sanitary Department did or did not cause to Dr. Schmeil any injuries as to deserve compensation.

Touching the first point. Whereas, it is proved from the documents presented by Dr. Schmeil, especially by the letter sent him by Greene Pasha (representing the Sanitary Department) on the 23rd of July, 1888, No. 925, of which a copy¹ and translation were presented also by the Sanitary Department's lawyer, in which H. R. Greene Pasha, in his above quality, informed the said doctor to continue supplying in future the 120 copies of the *Shifa* after the expiration of the then current year's subscription, ending 15th February, 1888, until further orders, mentioning at the same time that that was obtained through steps taken by the Sanitary Department with the Finance Department. Whereas, it is clear also from the documents presented by both parties that Dr. Schmeil in reply to that letter of Greene Pasha, wrote on the 24th July, 1888, accepted and considered the said Sanitary Department as a subscriber for the year 1888-9. Considering that it is quite plain, from what has been stated, the Sanitary Department did bind itself as a subscriber to the aforesaid paper for another period after the expiration of that ending 15th February, 1888; considering that the words "until further order," mentioned in the said letter, could not mean that the Sanitary Department was free at any time to withdraw its subscription, as, besides that, the subscription to the *Shifa* is annual, as it is marked on the outside thereof; the very word "future" mentioned in the letter of the Sanitary Department demonstrates that the renewal of the subscription was similar to the last made—viz., for one year, and not therefore for less than that.

As to the second point. Considering that the Sanitary Department wrote to Dr. S. Schmeil on the 10th of January, 1888, declining to continue the subscription to the *Shifa*; considering that the Sanitary Department's discontinuance of the subscription being contrary, no doubt, to the said letter of the 23rd of July, and consequently is a breach of contract; considering that this breach of contract was without the consent of Dr. Schmeil, contrary to what the representative of the said Sanitary Department pretended, because besides protesting against this step in his letter of the 12th of January, 1888, Dr. Schmeil proved to the court by a certificate of the 11th of May, 1888, signed by the proprietors of the Moktataf Printing Press, where the paper is printed, they declaring to have forwarded the *Shifa* at the beginning of its third year, commencing on the 15th of February, 1888, to all the Sanitary Department's clients, and it was returned by many of them.

As to the third point. Considering that it is proved by the Sanitary Department that the subscription for 120 copies of the *Shifa* was really as a subsidy to Dr. S. Schmeil, and not as an ordinary subscription; considering that the said paper was not a political one, and could not be sold in the public streets, but a scientific one, issued according to the number of its subscribers; considering that the Sanitary Department has broken its engagement, and has, therefore, without doubt, caused Dr. Schmeil losses, as it is not unlikely that the said doctor, counting upon the Sanitary Department's subscription, should have bound himself

to other subscribers to furnish them with the journal, and to the Moktataf Printing Press to continue its issue; considering that no contract could be cancelled, according to law, unless by the common consent of both parties; considering that whosoever should cause to others injuries would be responsible therefor; considering that this being the case, enquiries were to be made as to what compensation should be awarded to Dr. Schmeil; considering that the labour for writing and printing the journal is the same whatever difference may be in the number of copies printed; considering that from what is stated and from the circumstances of the case, the court thought proper to award Dr. Schmeil eighty Napoleons as damages; considering that the appeal of the Sanitary Department should be rejected, and that of Dr. S. Schmeil only be admitted, and the above verdict modified; considering also that the party condemned should bear the expenses; for these motives the court has decided, in presence of both parties, and in a definite manner, at its sitting for civil matters, to accept in form both Dr. Schibly Schmeil's and the Sanitary Department's appeal, and sanctioned the agreement of both parties to join both appeals together, and decide both jointly. As to the subject, the court rejects the Sanitary Department's appeal, accepts that of Dr. Schmeil's, and modifies the verdict of the lower court appealed against, in the following manner—viz., condemning the Sanitary Department to pay the aforesaid doctor, as compensation, the sum of eighty Napoleons, with the expenses of both courts, and the lawyer's fee before this court, estimated at 200 P.T. (£2), and rejects all other demands.

VI.—AMERICAN NOTES.

THE great event of the month (September) here, has been the meeting of a number of American societies at Washington, under the presidency of Dr. John Billings, the distinguished bibliographer. His selection for this position comes rather as a surprise, as he is not a physician of eminence, nor does he hold in the States any other reputation than that of a good organizer and a good maker of catalogues. One reason may have been that he was the chief opponent of the late International Medical Congress. As he led the opposition he was entitled to some reward. However, he was chosen. This Association of American Medical Societies met in Washington in September, 1888, to show the world what America really could do in the way of organisation, and in the way of real scientific work. I shall send you later on the estimate of America upon this meeting. In your home papers a discussion has been going on as to whether marriage was a failure. As indirectly bearing on this question I would direct the attention of your readers to a brochure published by Dr. H. S. Pomeroy, of Boston, "On the Ethics of Marriage." This is an appeal to Americans to resist the temptation there is when they enter upon wedlock, to restrict the number of children, or to prevent conception. As you read a paper on the subject at the International Medical Congress, it may interest you to know that one of our own physicians has since taken the matter up, though he does not treat it on the same lines you did. American physicians have long been aware of the great danger which threatened the country, from the limitation of families, and from the effects of abortion procuring. Numerous papers have been written on the subject, and inquiries have been made as to the extent of the evil. Physicians have been powerless to a certain extent, but they have been aware that the command to increase and multiply has not been carried out. The following is a striking instance of the existence of the evil in New York:

The Bureau of Vital Statistics reports the total number of births in New York city as 31,319 for the year 1886. The number of Catholic baptisms for the year in the city of New York, says our contemporary the *Catholic Review*, is 22,000, being over two-thirds of the total of children born in the metropolis! If all these children could be educated in Catholic schools what a Catholic city New York would soon become? Assuming the number of Catholics in New York city to be 600,000, and having ascertained from official sources that during the year over 22,000 infants were baptised by Catholic priests, then there are but 9,000 children left to the credit of the remainder of the population! Estimating the total population of the city at 1,200,000, the result is as follows: In the Catholic population of 600,000 there is one child born each year to about every twenty-seven inhabitants, while among the 600,000 people outside the Catholic Church there is but one child born to every sixty-six inhabitants! In other words, there are approximately three Catholic children born in New York city to one child of all other denominations.

Dr. Pomeroy's paper has been well received by the American press, and one great step has been gained—viz., ventilation of a great social evil.

The Overcrowded State of the Profession in America is attracting general attention, and we are puzzled to find a remedy. The

¹ [Copy of letter, No. 925.]

Ministère de l'Intérieur,
Administration
des Services Sanitaires et
d'Hygiène Publique,
No. 925.

LE CAIRE,
LE 23 JUILLET, 1887.

MONS. LE DOCTEUR, —J'ai l'honneur de porter à votre connaissance qu'à la suite des démarches faites par cette Administration Sanitaire auprès du Ministère des Finances, elle a obtenu de ce dernier que la subvention de 120 napoléons qui vous était faite pour 120 abonnements à votre journal "El Chifa" serait maintenu à l'avenir. Vous soudrez bien en conséquence Mons. le Docteur à l'expiration de ces 120 abonnements pour un an continuer, pesqu'à nouvel ordre, l'envoi du journal "El Chifa."

Veuillez agréer Mons. le Docteur l'assurance de ma considération distinguée,
Le Directeur,
Mons. le Docteur Schmeil,
Au Caire.

H. R. GREENE.

older countries are in much the same position—Germany, France, Austria, England, etc., have an overplus of medical men. Some suggest higher preliminary education, and a longer course of medical study; but these remedies are evidently not sufficient, because in Germany, France, and Belgium they have been long in force, and overcrowding is still complained of. There is a fascination about medicine. I know not how to describe it, but certainly it is not the fascination of money making. We are supposed to be very fond of the almighty dollar, but medicine does not offer much reward to her votaries here. A few make magnificent incomes, but the bulk of the profession have to be content with modest fees and modest incomes. The public do not like paying doctors' bills. The following from the *Denver Medical Times* illustrates this:

The medical fraternity of Johnson County, Mo., adopted the following resolution: "After January 1, 1888, no account will be allowed to run over six months from date of first visit, without satisfactory settlement. All accounts are due when services are rendered. Parties who are in the habit of running bills from one year to another without paying, must continue to employ their former physician until he is paid in full, or pay cash for every visit in advance to the new one. Charity cases excepted." The State Society of Arkansas has adopted a similar rule, and the law sustains them. If such rules were general all over the United States, would it not be a mercy to the people by compelling them to stand by their physician long enough to give the patient a thorough course of treatment, as well as teach people to pay their honest debts.

You may imagine from meeting American physicians and surgeons in Europe that the profession in America is a very lucrative one, but you only meet the successful ones who take a trip to Europe to gather new experience, and to add to their reputation at home. You may be sure that they take means of letting their patients know that they have been to the great seats of learning in the old world. They come back not much wiser, illustrating the truth of the old rhyme:

Little they learn't,
But much they've spent,
But they have been to Europe.

VII.—OPHTHALMOLOGY.

The Indication for the Operative Treatment of Paralytic Deviation of one Eye.—Graefe (*New York Medical Journal*, 1888) calls attention to the vague ideas which still exist in regard to the principles involved in the operative treatment of the functional annoyances and disturbances caused by paralysis of the ocular muscles, especially of one of the muscles which pull the eye upward or downward. The two operations to be considered are the operation of advancement and that of tenotomy. If in the case of a paralysed muscle no increase in motility is gained by the operation of advancement, still the so-called dislocation or displacement of the arc of rotation toward the side of defective motility will help to make this defect less noticeable. With reference to this effect of the operation, it might better be known as the method by substitution. While the operation of advancement is always done on the paralysed muscle, the operation of simple tenotomy may be done either on the antagonist of the paralysed muscle or on its associated muscle in the other eye. In the first case the operation is mainly done for the purpose of endeavouring to re-establish the loss of equilibrium between the paralysed muscle and its normally enervated antagonist. In the second case the main object is a restoration of a symmetrical action of the muscles co-operating in the associated movements of the eyeball, and hence this operation is a compensatory one. In the case of an isolated paralysis of the rectus superior or the rectus inferior, the operation of compensatory tenotomy must be avoided, inasmuch as it is practically impossible. Hence in such a case the paralysed muscle must be advanced, and its antagonist must be divided, for the purpose of restoring equilibrium.

A Method of Operating for Entropion and Trichiasis.—Pfalz (*ibid.*) suggests that entropion and trichiasis may be cured by one operation, which consists in a stretching of the tarsus by the excision of a wedge-shaped piece, as Streetfield and Snellen have suggested, and the simultaneous lifting forward and upward of the edge of the lid by cutting out a piece of skin and closing the defect by sutures, as Arlt, Jaesche, and Burow have done. The operation which Pfalz suggests differs from the other in the broader base given to the wedge, the position of the skin and muscle excision, and the nature of the suture. The operation is indicated for all cases of entropion due to pathological changes in the lid, especially in the tarsus and conjunctiva.

The Origin of Ruptures of the Sclerotic and Choroid.—Hughes (*ibid.*) holds the following views in regard to rupture of the sclerotic: The blunt force must strike the eyeball with a superficies of twenty

millimetres in diameter, and about in the direction of its centre of gravity. The greater superficies prevents any lateral yielding of the eye, and it is therefore driven into the orbit. The globe is pressed strongly against Tenon's capsule, so that any rotation in consequence of greatly increased friction is rendered difficult and even impossible. As the intra-ocular tension increases, the part of the eyeball farthest away from the point of contact with the foreign body assumes the shape of a cup or bowl. The restraining ring becomes more and more curved, until finally the eyeball bursts. The point of rupture is always at the line of union between the cornea and sclerotic. The margin of the sclerotic is under strong tension, while the eyeball assumes a globular shape, because it is the only zone of the eye which under normal relations appears concave outward. If now this point of tension coincides with the curvature of the restraining ring, the rupture must of necessity occur at this point. As the intra-ocular pressure bears perpendicularly on the walls of the eye, the rupture also occurs in the same direction. In the great majority of cases the ruptures occurs in the supero-nasal quadrant, because the force of the blow comes from downward and outward, though the rupture may occur at any point. In the case of the choroid, the force coming from the same direction, the rupture cuts the line between the optic papilla and the macula, and is concentric with the optic disc. If the blow comes from the nasal side, the choroidal rupture occurs on the nasal side of the disc. If the blow comes from above or below, the rupture occurs in the vertical direction. Hughes formulates his conclusions as follows: 1. In rupture of the choroid, the *contrecoup* plays a part merely in those cases in which a small part of the cornea is struck. 2. Ruptures result as a consequence of tension, induced on the one hand by a flattening and yielding of the cornea, and on the other by an increase of those diameters of the cornea which are perpendicular to the axis of vision, as a result of incompressibility of the media. 3. The ruptures in the optic nerve are to be attributed to the unyielding character of this region; the choroid is here firmly fixed, the increasing tension acts upon it from all sides, especially upon the small part of the papilla, and there the rupture must occur.

The Operative Treatment of Trachoma.—Schuller (*ibid.*) gives the following directions for operating on cases of trachoma: After careful antiseptic irrigation of the eye and *cul-de-sac*, the operator strongly everts the eyelid and pushes the retrotarsal fold as far out as possible by pressing the edge of the lid against the eyeball and into the orbit with the end of index finger. This manoeuvre is aided by an assistant pressing the other lid back against the eyeball without everting it. The operator then takes Snellen's broad squeezing forceps in the right hand, and grasps the retrotarsal fold of conjunctiva in a grip from two to four millimetres wide, and if possible throughout its entire length, and firmly locks the forceps. The assistant then firmly holds the lid which is to be operated upon, the operator takes the forceps in the right hand, draws the conjunctiva as far as possible outward and forward, and with a pair of Cooper's scissors cuts off all the swollen portion as the subconjunctival tissue. The hæmorrhage is checked with iced compresses, the *cul-de-sac* is thoroughly cleaned by irrigation with an antiseptic solution, and the eye closed with a bandage, which is changed daily for three days. If both eyes are operated upon simultaneously, they are kept bandaged for eight days, the bandage being kept wet for twenty-four hours with the antiseptic solution; and the eyes are irrigated every day with the same. After eight days the wound usually presents a linear cicatrix. The treatment of these cases is thus materially shortened, and the accompanying processes being removed, the wound also heals rapidly. Recurrence of the trachoma is very rare.

Corneal Fibroma.—Scott and Sroly (*ibid.*) report a case of this kind occurring in a young man aged twenty. In March, 1886, there was a small yellowish-white growth in the left cornea, which has existed ever since. The tumour occupied the supero-temporal quadrant of the cornea, was oval, the long arc axis being six millimetres, the short four millimetres in length, and it lay with its long axis perpendicular to the corneal diameter, which bisected it. Small blood-vessels could be seen ramifying over the growth, which was sharply defined from the surrounding corneal tissue. Its surface was not yet elevated, and the epithelium passed over it without a break. A piece of the growth four millimetres long by three wide was excised, which procedure was followed by considerable hæmorrhage. The little ulcer which was left healed over in a few days, blood-vessels developing in it with great rapidity. Sections made of the hardened piece showed that the conjunctiva corneæ was unaltered, but immediately beneath this the abnormal tissue was seen to supplant the corneal tissue proper. The new growth was mainly formed of connective tissue, with a large number of blood-vessels, and numerous groups of nuclei, in some places so numerous as to suggest sarcoma. The microscopic structure was very similar to a cicatrix. The corneal opacity may have been congenital, antedating the ophthalmia which the patient had had in early youth.

Scheme for the Topical Diagnosis of Disturbances in the Reflex Movements of the Pupils.—Magnus ("Kl. Mntsl. f. Augeneilk.") has developed rather an ingenious scheme for locating the position of the lesions in disturbances of the reflex movements of the pupil, and by this he also claims to be able to gain a clear insight into the conditions of pupillary reactions in the normal state. He maintains: 1. That the direct and consensual reactions of the pupil show no marked difference, inasmuch as both follow the direct transmission of the light-stimulus to the nucleus of the oculomotorius (due to an incomplete decussation in the chiasm). 2. That the direct and consensual pupillary reactions are equal in extent to each other, inasmuch as both are really direct. 3. That the direct pupillary reaction is composed of that part of the light-stimulus which passes along the uncrossed fibres of the optic nerve of the excited side to the corpora quadrigemina, and thence to the oculomotorius nucleus of the excited side, and of that part of the light-stimulus which passes through the crossed fibres of the optic nerve to the corpora quadrigemina, and oculomotorius nucleus of the opposite side, and returns through the central union of both reflex circles to the nucleus of the same side. 4. The consensual reaction is composed of that part of the light-stimulus which goes through the crossed fibres of the optic nerve to the corpora quadrigemina, and thence to the oculomotorius nucleus on the side opposite to the irritated eye, and of that part of the light-stimulus which passes through the uncrossed optic nerve fibres to the corpora quadrigemina and oculomotorius nucleus of the irritated side, and thence passes through the central union of both reflex circles to the oculomotorius nucleus of the opposite side. 5. The conditions of decussation of the optic nerve in the chiasm and the central union of the reflex circles are the cause of the size of the two pupils being the same. Differences in the diameters of the pupils can therefore never be caused by disease or lesion of the nerve tracts which conduct the light-stimulus to the centre.

Experimental Investigations in Keratoplasty.—Wagenmann (*ibid.*) begins by citing the present status of the operation known as keratoplasty. The transplantation of flaps involving the entire thickness of the cornea has hitherto proved unsuccessful, not only in experiments on animals, but also in experiments on man. The flap becomes adherent and heals, it is true, but it does not remain transparent. The partial transplantation, as described and performed by Von Hippel, on the other hand, promises to give good results in suitable cases. Wagenmann's experiments were all performed on rabbits, under the influence of a 5-per-cent. solution of cocaine, with a previous disinfection of the skin and lids by a sublimate solution (1 to 1,000), and of the conjunctiva by a sublimate solution (1 to 5,000). If the animals be isolated, all means of protection or covering may be abandoned, though it may sometimes be wise to cover the parts with the nictitating membrane, drawn over and stitched to the outer canthus, or by means of a large conjunctival flap. An objection to this latter method is that the conjunctival flap is very apt to slough and form a nidus for micro-organisms. Wagenmann's experiments proved that flaps transplanted without pedicles do heal by first intention and with normal transparency. In cases where the flaps become permanently cloudy, this may be due to some infection coming from without and interfering with the physiological process of healing. In man the possibility of this infection may be prevented by strict antisepsis. The preservation of the endothelium is of great importance in maintaining the transparency of the transplanted flap, for, if the endothelium be injured, the aqueous humour causes a loss of transparency of the transplanted flap by imbibition. Through this imbibition the nutrition of the corneal cells and the parenchyma is interfered with, the cells are either partially destroyed or proliferate, and the parenchyma become markedly fibrous. The swelling of the tissue caused by this imbibition only disappears after several days, and the pressure thereby induced sets up changes which outlast the regeneration of the endothelium.

A Case of Homonymous Right Hemianopsia with Alexia and Paralysis of the Trochlearis.—Brandenburg (*ibid.*) reports an interesting case of this kind occurring in a man aged 65. The patient, a healthy man, with only one useful eye, was suddenly attacked with vertigo, which ended in coma of 36 hours' duration. When he regained consciousness, there was dulness of intellect and of memory, slight aphasia, right hemianopsia, paresis of the right trochlearis nerve, secondary contraction of the antagonist, and alexia without aphagia. Owing to the left eye being blind, it could not be determined by the perimeter whether a median hemianopsia due to a lesion of the chiasma was present, or whether there was an homonymous hemianopsia, caused by some rupture of continuity of the fibres of the left optic tract somewhere between the chiasm and the peripheral ends of the fibres. The presence of homonymous hemianopsia was determined by the fact, that in illumination of the nasal half of the retina by the lens or mirror, the pupil contracted and the patient saw light. Hence the left optic tract must have been intact as far as the point at which its fibres form

the reflex arc, for contraction of the pupil with fibres of the right oculomotor nerve—that is, as far as the corpora quadrigemina. The cause of the hemianopsia must, therefore, lie on the side of the cortex from the plane of this reflex arc. The alexia or word-blindness was not marked. The lesion was somewhere in the left hemisphere. The absence of anæmia and of heart disease, and the gradual diminution of the severity of the symptoms, point to hæmorrhage as the cause, and this view is strengthened by the fact of the rigidity and sclerosis of the peripheral arteries.

VIII.—OBSTETRICS AND DISEASES OF WOMEN.

On a danger of Washing Out the Peritoneum during Laparotomy.—M. Polaillon reported a case to the Obstetrical and Gynecological Society of Paris, in which, after free washing of the peritoneum with warm distilled water, the patient was taken with grave syncope and suspension of respiration. Artificial respiration was employed; but as the woman did not show signs of coming to, an incision was made in the skin of the neck, to perform tracheotomy. Fortunately, at this moment spontaneous respiration was produced, and the patient recovered. M. Polaillon said that he had observed similar results in other cases, and was so impressed by the phenomena that he only resorted to peritoneal washing in case of absolute necessity. He had been able in some cases to restore animation; but unfortunately, he had to report a case in which death took place, in spite of all efforts made to save the patient. The leading features of the case were as follows:—

Mdlle. L—, æt. twenty-eight years, dressmaker, entered De la Pitié 5th July, suffering from a large abdominal tumour, which was recognised as an ovarian cyst. With the exception of her mother, who died hydropic, the family history was good; six sisters enjoyed good health. At sixteen she commenced to menstruate, but it was always irregular, stopping for one or two months, followed from time to time by a colourless discharge like water. She had never been pregnant. For about seven or eight months previously she began to feel some pains in the abdomen, especially at night, in the left side, which increased on pressure, so much so that the left lateral decubitus was very painful, the courses ceasing at the same time, and the stomach increased slowly in volume. For a month the pain had been so severe, she had been obliged to keep her bed. The tumour occupied the hypogastrium and the left iliac fossa, and she looked as if she were six months pregnant. There was no œdema of the lower members or any visceral trouble. Ovariectomy was decided on, and was performed on the 12th July. Chloroform was given in the usual manner, though the patient did not readily fall under its influence, and she had a tendency to recover from it during the operation. The cyst was very adherent, and there was a pretty free flow of blood, to wash out which distilled carbolized water was used at a temperature of about 37°. This only took two or three minutes. Suddenly respiration increased, then became weaker, and stopped. The face became purple, though the heart continued to beat. Time, 10.15. Chloroform was commenced at 9.35. Artificial respiration was instantly practised, and continued methodically. At 11, as respiration did not spontaneously establish itself, an incision was made for tracheotomy, when some futile respirations took place, and continued regularly for from ten to fifteen minutes. The face was less purple, the pupils less contracted, the heart beating regularly and rapidly. The patient was still insensible. During the period of amelioration M. Polaillon completed the abdominal toilette. In spite of the use of pure oxygen, friction of the skin, electrification, inhalation of ether, etc., the patient died at midday. Chloroformisation lasted about thirty-five minutes, forty grammes of chloroform being employed. Blame cannot be laid alone on the chloroform. The washing out of the peritoneum must also be incriminated, because the syncope appeared to come on with the warm water.

M. Polaillon's explanation is that the contact of the warm water with the lower surface of the diaphragm, or with the solar plexus, produced an impression which by reflex action provoked arrest of respiration and syncope—an arrest more likely to occur in a patient whose respiratory power is already weakened by chloroform. M. Polaillon believes that lavage of the peritoneum is a dangerous practice when the water penetrates into the upper portion of the abdomen, and especially when it comes in contact with the lower face of the diaphragm. To lessen the danger it is necessary to place the patient in such a position that the water shall be confined to the pelvis and lower portion of the abdomen, and secondly, the temperature of the water should never be more than 37°.

M. Just Lucas Championnière said that the case of M. Polaillon suggested two reflections. He did not attach so much importance to the washing out of the abdominal cavity. He had lately operated on a cyst which was ruptured, and the peritoneum was covered with blood and pus. He simply cleaned the surfaces with a sponge, and he had no complication. M. Polaillon had injected two or three litres of phenic

water, 1-100. The solution at this strength was useless; stronger solutions were dangerous. The accident he experienced was no doubt due to the chloroform. Chloroform at the hospitals was poor, and especially badly preserved. M. Guerin said that M. Polaillon's case recalled to him the fact, that seven or eight years ago, in performing laparotomy on a man for intestinal obstruction, he had occasion to introduce his hand into the abdomen; but every time his hand touched the diaphragm respiration ceased, and the heart's action became weak. He thought there was a great analogy between the cases. M. Polaillon replied that he did not abuse the system of lavage, but it was necessary when the abdomen was filled with pus and blood.

On Version Brusquée.—At the same meeting Dr. Loviot introduced this subject. The word brusquée is that of Madame Lachapelle, though it has been interpreted by most authors in a different sense from that in which she employed it. Version brusquée, according to medical classics, consists in introducing the hand in forced pronation between the posterior face of the symphysis and the anterior plain of the foetus in dorso-posterior positions. Now Madame Lachapelle has not formulated such a rule. This form of version, according to her, consists in carrying the hands directly (brusquement) to where the feet are, in pronation or supination, before or behind the foetus according to need. If the foetus presents the left shoulder (the third position of Madame Lachapelle, who adopts, in deference to Baudelocque, his classification—viz., four positions to each shoulder) the left hand must be introduced, but if the right hand be introduced in error, version may still be performed, says Madame Lachapelle, by carrying the hand towards the right anterior side of the uterus. If the foetus presents in the fourth position of Baudelocque, the left hand must be introduced, but version may still be performed, if the right hand be wrongly introduced, by carrying it to the posterior and left part of the fundus of uterus. The following are Madame Lachapelle's words ("Practice of Midwifery," 1825, tome ii., p. 223):—"Before rupture of the membranes we cannot often exactly determine which shoulder presents, so as to make a choice of one or the other hand; if the hand introduced recognises, after rupturing the membranes, that it is applied to the opposite shoulder we may still act contrary to the rule given by *brusquant* the version, by carrying the hand directly and immediately to the place where the feet of the foetus ought to be. For this it would be sufficient to incline a little more on the radial border. Suppose that the left hand pierces the membranes and recognises the left shoulder in the third position, then in place of following the foetus and gliding along its members it is carried brusquely in pronation towards the right and anterior side of the uterus, there seizing the feet of the child."

Madame Lachapelle's view has been entirely changed by authors who have written after her. Dr. Loviot gave a number of quotations from different writers, to show how differently podalic version is practised and taught by the best masters. In the discussion which followed, M. Charpentier said "that he agreed with Madame Lachapelle in going directly for the feet without considering which was the hand." The choice of hand is absolutely a matter of indifference. If version is easy we succeed with the other hand; when difficult, the difficulty is very often due to escape of the amniotic fluid and to uterine retraction. It is the uterus which impedes the movements of the hands, and which compels us to change the hands. There may be an advantage in having certain rules, but we know very well at certain times we are obliged to do the best we can. M. Pajot said that he considered the choice of the hand as a matter of indifference in presentation of the trunk, in others not so. He was absolute on this point. The best method is that taught by Antoine Dubois—that is, to do as you can. We must go to the fundus of the uterus where the feet are, and seize them. M. Bailly said practically the choice of the hand had no value, yet it was not always a matter of indifference as to which hand was employed. The general rule was to use the hand most accustomed to. All depended on the condition in which we found our patients. A full report of this discussion is to be found in the *Bulletins et Mémoires de la Société Obstétricale and Gynécologique de Paris*, No. 8, pp. 232-247.

Is the Corset useful or injurious?—*L'Homme*, an illustrated journal of anthropological science, gives a short study on respiration in women, in which it appears that according to Mays, of Philadelphia, who examined eighty-one women, from ten to twenty, of Indian race, pure or crossed, the respiration was diaphragmatic or abdominal in seventy-five, costal in three, and costal abdominal in three. The respiration in women without corsets is decidedly abdominal. The respiratory mode of the corsetted, or civilized woman, is due to her costume, and not to the demands of gestation. According to Mays, thanks to the corset, women are less disposed to consumption (*Gazette de Gynécologie*, Sept. 15th, 1888).

Antiseptic Sponges for Gynæcological Operations.—The sponges are steeped in the following solution during twenty-four hours, wrung out, and then dried in the air.

Bichloride of Mercury	1 gramme.
Phenic Acid	5 grammes.
Alcohol	60 "
Boiling Water	500 "

When they have been disinfected the sponges might be soaked in one or another of the following solutions:—

1. Boracic Acid	15 grammes.
Boiling Water.....	500 "
2. Tannin.....	30 "
Boiling Water.....	500 "
3. Perchloride of Iron	40 "
Boiling Water.....	500 "

Foreign Bodies in the Vagina.—Dr. J. Rouvier, Professor of the Faculty of Medicine at Beyrout, Syria, has published in the *Revue Médico Pharmaceutique*, Constantinople, an excellent account of the foreign bodies found in the vagina. They are numerous, and include pessaries, bobbins, bottles, wood, sponges, pomade pots, leeches, fragments of syringes, hair pins, hen's eggs, instruments of surgery, etc. He adds to this list a fruit—the citron. These objects can be classified:—

1. Foreign bodies introduced with a criminal intention by someone else. Dupuytren found a pot in the vagina of a young girl. This had been introduced by a soldier, who had violated her. 2. Foreign bodies introduced by the woman, either to provoke abortion or to gratify passion. To favour the expulsion of the foetus before term, women generally use hair-pins. By the aid of a mirror they try to introduce them into the uterus. Sometimes the pin escapes, and is found lodged in the vagina. Boer, Wharton, Sinclair, Montgomery, have given instances of this nature. Innumerable objects, depending on the occupation of the person, are introduced with a lascivious aim. 3. Foreign bodies introduced by the woman or the surgeon, with a therapeutical aim. In this class are tampons and pessaries. They are allowed to remain, and their presence in time is forgotten. Pessaries of all kinds are invented by the women themselves, for prolapse or displacements. Fragments of specula, of syringes, silver wires, *serres fines*, sponges, and leeches, are found. The vagina becomes tolerant in many cases of these foreign bodies. Bonet cites a case: a pessary had remained in a vagina for twenty-five years, and was then spontaneously expelled. Dr. Rouvier extracted from a woman a citron, which she had herself introduced for prolapse. Dr. Rouvier has brought forward this subject, as it is a neglected one. The gynæcologist should bear in mind in examinations the possibilities of these foreign bodies being found, accounting for strange and anomalous symptoms.

Surgical Aids and Appliances.

106.—HOFMANN'S IMPROVED PESSARY.

DR. HOFMANN'S pessary has been improved, so that it takes up less room and conforms more closely to the anatomy; this advantage has been obtained by the adoption of lateral concavities. These pessaries are manufactured by Messrs. Krohne and Sesemann.

107.—THE ST. DALMAS PREPARED OINTMENT SHEETS, ETC.

THE St. Dalmas plasters are well-known in all their varieties. They have added to their list by preparing sheets for the application of ointments, lotions, or other medicaments. These sheets vary in size from two by two to twelve by sixteen. The sheets consist of square, round, or oval pieces of waterproof sheeting or chamois leather, having a self adhesive border, affording a centre on which can be placed a pad or any medicament desired. A blister or ointment can be thus readily applied to the skin without soiling the linen, and without fear of the plaster becoming disturbed. These plasters will be found of great service to many general practitioners.

108.—PESSARIES FOR PROLAPSE OF THE BLADDER.

DR. F. PEARSE has devised an instrument for this condition, which he has found of great service in several cases. It consists of a horse collar shaped loop, to the small end of which is attached the stem, bent about two inches from the loop, so that the stem is about 90° with it. The loop, with or without cross bars, is passed into the vagina, and when

the instrument is fixed, supports the anterior wall of the vagina and prevents it descending. The stem passes up over the pubes, where it is fixed by a broad band passing round the pelvis in the position of an ordinary truss. It is so fixed in the broad band that the instrument is unable to descend, and the broadness of the band prevents the instruments being forced out of the vagina. On the other hand it does not exert any injurious pressure, but acts purely as a support, preventing the bladder from descending, rather than exerting any lifting force upon it. It is stated to be quite comfortable to wear. It is essential that the stem passing over the pubes should be fixed in a band at least two inches in width.

109.—KROHNE'S MODIFICATION OF THOMAS'S DOUBLE HIP SPLINT FOR THE TREATMENT OF DISEASES & INJURIES OF THE SPINE.

MR. KROHNE has modified the well-known Thomas's splint for the purpose of giving support to both sides of the spine. This he has done by adding to this splint a pelvic band, a support for the shoulders, neck, and head, and two bars. The two upright bars are made after the shape of a healthy, normally formed child when in the recumbent position. The two cross-bars, the pelvic band, and the band reaching to below the axillæ, support the pelvis and body laterally. The lower extremities are kept in position by cross-bars supporting the thigh and lower third of leg. The rest of the splint consists of the support for the shoulders, neck, head, and both feet, so that the entire body is supported.

110.—UTERINE DILATOR.

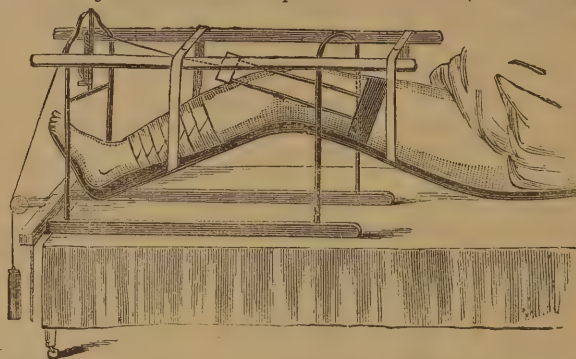
DR. WILLIAM H. WATHEN (Louisville, Kentucky) has made an improvement in this form of instrument for rapid dilatation of the uterus. This dilator, as now manufactured by Messrs. Tiemann and Co., has been much improved, and to its superior qualities has been added a principle that makes it as perfectly aseptic as it is possible to have any surgical instrument. The blades are held together by a modified French lock that admits of the instrument being separated into its different parts in a few seconds, so as to be easily cleaned and made aseptic. This is the only dilator that is made after this fashion, and as the handles are of vulcanized rubber, hermetically sealed over the steel, there is no place where it is possible to have poisonous matter retained after any reasonable degree of surgical cleanliness.

III.—SERRATED SCISSORS AND COMPOUND TENACULUM FOR AMPUTATION OF THE CERVIX UTERI, AND FOR THE REMOVAL OF PEDUNCULATED AND SESSILE TUMOURS FROM THE CERVIX.

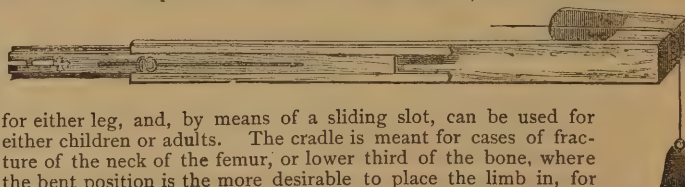
DR. WILLIAM H. WATHEN (Louisville) has also devised an instrument for the above-named purposes. The scissors is made after the fashion of an ordinary scissors, bent at right angles on the flat, with the blades slightly curved on the edge and finely and sharply serrated. It cuts by a rotary motion; and an indurated cervix, or a hard fibroid tumour with a base two inches in diameter, may be removed by it in a few minutes, with no more hæmorrhage than usually follows the use of the *écraseur*. It affords the best and the safest means to perform these operations, and in amputations of the cervix, the mucous membrane of the intra-cervical and the extra-cervical tissues may be brought together, and will leave no open wound to absorb septic matter, or to heal by granulations, and probably cause cicatricial contraction of the canal such as often follows amputations by the *écraseur* or the galvanocautery. This scissors has recently been much improved by Messrs. Tiemann and Co., and has been made more powerful and more aseptic. But it is necessary to have a strong double tenaculum forceps, so that the cervix or tumour may be held steady while being removed by the rotary or sawing motion of the scissors. Dr. Wathen has improved the ordinary tenaculum by combining with it another, to be introduced into the os in amputations of the cervix and fastened into the tissue of the cervical canal. By this means we may remove a cone-shaped piece by pulling down the intra-cranial tissue before introducing the outer teeth of the tenaculum into the vaginal mucous membrane of the cervix; and by pulling gently on the tenaculum during the process of amputation, the excavation into the uterus will thereby be increased. There is no necessity of dividing the mucous membrane high up, and therefore the danger of cutting into the peritoneum is relatively less. With this scissors and tenaculum the excision may be performed without risk of wounding any part of the vagina. The tenaculum, as manufactured by Messrs. Tiemann and Co., can be immediately separated into its four parts, so as to be perfectly cleansed and made aseptic.

112.—SPLINT FOR FRACTURE OF FEMUR.

DR. R. NELSON JONES (Swansea) has invented two splints, figured below, for treating fracture of the femur. The one is the extended straight position, with the stirrup extension obtained by the usual plan of strapping applied on each side of the limb below the knee. The other is a cradle with a rise and falling pulley, and the stirrup extension applied each side of the thigh. A piece of wrought iron reaching from behind the buttock to the toes, bent at any suitable angle, acts as a stay and back splint. Lateral holes are punched in the thigh parts, and in the lower part below the knee, for the purpose of passing leather straps through. The limb may then be hung to the bars of the cradle. Mr. Jones has had holes punched in the iron, which reaches



behind the buttock. A band or strap can be passed through or round the trunk. There is also a perineal band as well for the purpose of fixity, and to steady the splint to the limbs. In children up to seventeen years of age, the straight splint or long Liston is the one generally used. The first splint will be found the most useful, as it can be used



for either leg, and, by means of a sliding slot, can be used for either children or adults. The cradle is meant for cases of fracture of the neck of the femur, or lower third of the bone, where the bent position is the more desirable to place the limb in, for comfort and readiness in the use of the bed-pan. This position is the best. The traction, Mr. Jones says, he has obtained by the stirrup strapping applied on each side of the thigh, the cord passing over a rise and falling pulley, the latter fixed at any desirable angle. The shortening that occurs in cases of fracture of the femur will entirely depend, says Mr. Jones, on the character of the fractured ends, rather than any special mode of treatment. To obviate this the extension method with stirrup strapping seems the best after the irritable condition of the muscles has subsided.

Medical Miscellanea.

THE subject of our next illustration will be Dr. D. Hack Tuke.

Dr. Vandyke Carter has retired from the Indian Medical Service.

At the annual meeting of the South African Association, Dr. Charles J. K. Murray delivered an admirable address "On National Disease Problems," which we publish in another column.

During 1889 a grand exposition will be opened at Paris. Arrangements are now being made for a number of congresses—therapeutical, physiological, etc., to be held during that time.

"Blackmail," the author of which is a medical man, is to be produced at a special *matinée* at the Prince of Wales's Theatre early in October.

Dr. Whiteside Hime has been presented with £460 as a slight recognition of the esteem in which he is held by his fellow townsmen in Bradford, and as a protest against the treatment he has received from the Bradford Corporation.

The *Electric Review* of August 25th is very flattering in its observations on the article "On Modern Credulity" which appeared in a recent number. The profession is indebted to the *Electric Review* for its exposure of electric humbug.

Various rumours are current as to the amount of money Sir Morell Mackenzie received for his reply to the criticisms of the German physicians for his treatment of the late Emperor. The sum has been fixed at £300, £1,000, and £1,500.

We direct particular attention to the notice of the Registrar of the General Medical Council, to be found in our advertisement columns.

Dr. Gibber has had the courage to be inoculated with some cultures of the microbe of yellow fever made by Dr. Freire. He survived, but is not disposed to have the dose repeated. Dr. Gibber believes that he has found the microbe, in a bacillus somewhat resembling the comma bacillus.

The Light-Magnet Company, Jubilee-street, Bradford, Yorkshire, are manufacturing light magnetic signboards, clock dials, bell handles, door knobs, keyhole shields, finger plates, wall papers, etc. (all clearly visible during night-time); also the light-magnetic match box, visible in the darkness all night. These appliances will be found of great service to medical men.

Dr. Hamilton is to be congratulated on the first three volumes of the transactions of the Ninth International Congress, which are now in the hands of the members. Little time has been allowed to elapse for their production. The labour of editing such a work can hardly be estimated. Two more volumes will shortly be issued to complete the series. The thanks of the members of the Congress are due to Dr. Hamilton, and doubly from the foreign members, who have received their copies free.

Dr. Keating, Philadelphia, is bringing out a "Cyclopædia of Diseases of Children" in three volumes of 1000 pages each, with the collaboration of English and American authors. The English authors are Drs. Money, Finlayson, Eustace Smith, Barlow, Bury, Dolan, Cheadle, Collie, Ashby, Macewen. The late Dr. Milner Fothergill was to have treated gout and urinary diatheses. The American writers include amongst others, Drs. Jacobi, Bartholow, Shakespeare, Parvin, Louis Smith, Duncan Buckley, Solis Cohen, Senn, Osler, De Costa, Pepper, Ashurst, Howard Kelly, Welch, Seguin, etc. The first volume will appear shortly. The publishers are Messrs. Lippincott & Co., Philadelphia.

We learn from our exchanges that at a recent meeting of the Pennsylvania State Medical Society, Dr. Wood of Pittsburgh amused the society by moving the adoption of a resolution that the president-elect shall take the following "Hippocratic oath:" "Having been duly elected president of this society, do you promise to hold the Pennsylvania Medical society, as it has been held by many illustrious men, as a stepping-stone to success, as a round in the ladder of fame, as a lemon to be squeezed, as a lever to raise your hopes, as a block and tackle to exalt your ambition, as a peacock's feather in a jackdaw's tail, as a lion's skin on a sheep, a spur on knighthood's heel, a garter on the leg of a courtier, a medal on the breast of a hero, and a convenient method of advertising your business, and that as soon as your time expires you will forever turn your back on it and ignore it? Selah!"

The effect of cascara sagrada in rheumatism was accidentally discovered by Dr. Goodwin in his own person, having taken this drug as a laxative while suffering from severe rheumatic pains in the shoulder. On the second day after taking it he was entirely free from all discomfort. These circumstances induced Dr. Goodwin to make a trial of the medicine on patients in the hospital. Discontinuing, therefore, all other medicines, he substituted the fluid extract of cascara, with results which surprised him. The medicine has been tried in upwards of thirty cases with satisfactory effects. The dose given was from twenty to thirty drops of the syrup, three times a day, or less frequently if acting as an aperient. In some few cases it has seemed advantageous to combine the sagrada with salicylate of soda.—*Medical Register*, Philadelphia, July 14th, 1888.

Correspondence, Notes, and Queries.

Communications, Books, etc., should be addressed directly to the EDITOR, "The Provincial Medical Journal," Horton House, Halifax.

Matters of business should be addressed to the Publisher, at the Offices, 10, Friar Lane, Leicester; or to the London Representative, Mr. E. BELLA, 58, Charing Cross Road, W.C., to whom all communications respecting Advertisements should be addressed.

We cannot undertake to return rejected MSS. unless stamps sufficient for their postage are enclosed.

We shall be glad to receive reports of Medical Vacancies, Appointments, Meetings of Societies, etc.

Papers containing passages for consideration should be marked. Correspondents must please attest their communications with their proper name and address (not necessarily for publication):

Contributions must be written on one side only of the paper. MSS. intended for publication to be sent in not later than the 16th of the month.

The insertion of any letter in these columns cannot be taken as necessarily indicating our adhesion to the views or statements therein expressed. The same remark applies to articles to which a name or nom-de-plume is attached.

THE POWER OR PROPERTY OF HEAT-STORAGE IN THE HUMAN FRAME.

To the Editor of "The Provincial Medical Journal."

SIR,—In conversation with a friend the other day who had spent several years of his life in Lima, the capital of Peru, situated some 12° south of the Equator, where it never rains and the Seasons are unknown, he remarked on the fact of his predisposition to colds of late, whereas the first winter after his return from Lima he could not find a place in England cold enough for him, and indeed for some time seemed proof against cold. His experience tallied with my own the first winter or two, but especially the first after my return from China. I did not mind the cold at all, and used to boast that I had either acquired a reinforcement of bodily health through my residence in the subtropical climate of Hankow, latitude 32½° north, or else that an *actual bottling up of heat and sunshine* had taken place within my system. Anglo-Indians, the children of Anglo-Indians and Anglo-Chinese, and the natives of India and China, when they come to reside temporarily in England, have the same tale to tell. Now, if it can be demonstrated, as I believe it can, that heat is capable of being actually stored up, in some latent manner, within the body, yet without making itself manifest by means of the thermometer, as light can be stored up in some bodies and electricity in others, then we have got hold of an important physiological principle hitherto unappreciated. Sulphide of carbon is a substance which had long been known to chemists for the possession of a certain luminosity in the dark, but only quite recently has it been utilised so as to make clock faces, match boxes, and such things luminous in the dark. It has been proposed to make reflecting lanterns of this substance for the use of persons in charge of powder magazines, and other inflammable stuffs; and they have been found to be, in fact, sufficiently luminous to enable such persons to see their way; and from the absence of caloric and flame they are, of course, perfectly safe. It has been proposed to apply the same substance to the exterior of dwelling houses, so as to save the expense of gas or electric light, and even to render niggers luminous. It is said, and here is the point, that when the luminosity fades, as it is apt to do, that it can be immediately restored by burning a magnesium light in front of the faded plates. Is it possible that this storage of light by inorganic bodies may be paralleled by the storage of heat in living organic bodies? The storage of heat in the case of bodies passing from the frozen to the liquid or soft condition is well known, many degrees of caloric being absorbed, in a latent manner, before the change becomes manifest. As a similar absorption of latent heat takes place undoubtedly in the case of living animal bodies passing from sub-frigid to temperate, why should there not be a continuous accumulation of heat, and it may be of light also, in the bodies of human beings steeped for years, so to speak, in tropical sunshine? Would not this theory afford a rational explanation of the insensibility of Africans, Orientals, and Anglo-Indians to the chills and damps and cold of our English climate during their first winter's exposure. This principle of an *internal and external* storage of heat, is of the utmost importance to remember in the treatment of delicate people and *poitronaires*, who are constantly getting upset by the atmospheric changes and the cold. Besides getting well warmed themselves, their clothes, boots, and wraps should be thoroughly aired before

the fire before being put on and going into the open air, and the seat covered with a warm rug. Every unwarmed garment, the boots especially, robs the body of a large amount of caloric before they become warm and comfortable, and this continued withdrawal of vital heat and necessary warmth leads at length to an inevitable, and it may be a fatal chill.

Liverpool, Aug. 28th, 1888.

GEORGE SHEARER, M.D.

REFUSE TEA AND CAFFEINE.

To the Editor of "The Provincial Medical Journal."

SIR,—You will doubtless remember that a great deal of interest has been shown in the Act of Parliament lately passed, permitting English manufacturing chemists to handle refuse tea, and make it up into caffeine.

Our Mr. Christy, to whose energy the passing of the Act was mainly due, has obtained from the makers, Messrs. Howards and Son, of Stratford, sample bottles of the first products, and we have pleasure now in handing you one of these to show you that our English manufacturers are quite able, when placed in similar conditions, to compete with the German.—We remain, Sir, yours truly,

THOMAS CHRISTY & CO.

GREENE PACHA ET LE "SHIFA."

To the Editor of "The Provincial Medical Journal."

SIR,—M. Greene Pacha, Directeur des Services Sanitaires et d'hygiène publique en Egypt, prétend dans une note intitulée "the Shifa" parue dans votre numéro d'Aout, en réponse à un article du Dr. Grant-Bey, du Caire paru également dans cette Revue, que mon *journal* a accusé le Département Sanitaire d'une mesure dont "l'origine est, suivante lui, dans ces *'throes of retrenchement'*" qui périodiquement devastent la terre d'Egypte et intenté, bien entendu à tort, contre ce Département un procès dont il est résulté de *grands dommages au foster parent of his own journal's offspring*. Il laisse aux lecteurs du *Provincial Medical* le soin de juger si une telle conduite est en harmonie avec le *high falutin* qui lui a valu le blâme du Ministère."

Green Pacha, assurément, dans le but d'éloigner de lui toute responsabilité dans le procès intenté par le *Shifa* dit hâtivement que ce journal existait déjà, quand la subvention lui a été accordée; il va plus loin encore, il dit que cette subvention était purement et simplement un "free gift" et que "dans aucun autre pays du monde on ne saurait admettre des dommages pour un *libre don* qui n'a pu être continué."

Mais M. Greene Pacha omet de dire que le *Shifa* a intenté son procès, précisément, en vertu d'un acte en règle signé par lui (M. Greene) acte qui conférerait au *Shifa* des droits éclatants que la seule et unique volonté du Directeur des Services Sanitaires et de son substitut, avait cru pouvoir abolir.

Malgré l'opinion toute personnelle des Chefs Sanitaires, les tribunaux Egyptiens n'en ont pas moins donné gain de cause au journal le *Shifa*.

Le *Shifa* n'ignorait pas les mesures édictées, par raison d'économie, par le Conseil des Ministres; mais il ignorait encore moins les motifs qui avaient dicté la conduite du Département Sanitaire.

En revanche M. Greene ignore ou paraît ignorer que la loi n'a point d'effet retroactif, et il semble oublier que l'engagement qu'il avait pris avec *Shifa* est de longtemps antérieur à la décision ministérielle; il oublie également la différence qui existe entre une subvention accordée par le Gouvernement pour le soutien d'une entreprise publique et un "free gift" accordée gratuitement à un particulier; il oublie aussi qu'il prenait en retour de son "free gift" un nombre équivalent de numéros du *Shifa* pour être distribués à ses médecins.

Je me considérerais trop heureux de voir, M. le Chef du Département Sanitaire d'Egypte faire largement des "free gifts" mais j'aimerais mieux encore, pour la réputation de son caractère le voir faire les "free gifts," à ces frais (il pourra alors trouver ailleurs à qui distribuer ses largesses) et non pas traiter des "free gift" ce qui d'autres appellent *remplir bien son devoir* en faisant servir le trésor public au soutien d'œuvres d'utilité publique.

Pour apprécier à sa valeur ce "high falutin" de M. Greene et faire justice de . . . Ses phrases amphigouriques je n'irai point, comme certains l'eussent fait, m'adresser au pouvoir abusif d'un Ministère déchu; je préfère en appeler au jugement sain, mais bien plus sévère du public; voila pour quoi j'ai hâte de mettre jugement suivant, sous les yeux des lecteurs du *Provincial Medical Journal*.

Le *Shifa* connaît ses devoirs, mais il connaît, aussi, ses droits.

M. Greene Pacha peut reconnaître aujourd'hui que dans cette partie, il n'avait pas tous les atouts dans son jeu.—Agréez, etc.,

S. SCHEMEIL,

Propriétaire, Rédacteur du *Shifa*.

Le Caire, 14th Août, 1888.

Bibliographical Record.

BOOKS, PAMPHLETS, ETC., RECEIVED.

On the Deleterious Results of a Narrow Prepuce and Preputial Adhesions. pp. 16. By Lewis A. Sayre, M.D. Reprint from Transactions of Ninth International Medical Congress.

Section of Contracted Tissues essential before Mechanical Treatment can be Effectual. By Lewis A. Sayre, M.D. Reprint from Transactions of Ninth International Medical Congress.

Physical Training for High Speed Competitions. By Percy Furnivale. London: Chatto & Windus, Piccadilly.

Transactions of the Ninth International Medical Congress. Vols. II. and III. Edited for the Executive Committee by John B. Hamilton, M.D., Secretary General. Washington: D.C.U.S.A. 1888.

A System of Midwifery, including the Diseases of Pregnancy and the Puerperal State. By William Leishman, M.D. Fourth edition. Volumes I. and II. Glasgow: James Maclellan & Sons.

Sanitary Administration of Egypt: Annual Report, 1887. Cairo: National Printing Office, 1888.

Elements of Medicine. By Alfred H. Carter, M.D. Fifth edition. London: H. K. Lewis.

A Manual of Ophthalmic Practice. By Chas. Higgins, F.R.C.S. London: H. K. Lewis.

PERIODICALS RECEIVED.

AMERICAN:—

1. The Journal of the American Medical Association.
2. The Therapeutic Gazette.
3. Medical Register (Philadelphia).
4. New York Medical Journal.
5. Medical Record (New York).
6. The Medical Bulletin (Philadelphia).
7. New England Medical Monthly.
8. Medical Times (Philadelphia).
9. The Polyclinic (Philadelphia).
10. The Analectic.
11. The Medical Standard (Chicago).
12. The St. Louis Medical and Surgical Journal.
13. The Denver Medical Journal.
14. Annals of Gynecology (Boston).
15. The Medical News.
16. The American Lancet.
17. The Medical and Surgical Reporter.
18. The American Druggist.
19. The Western Medical and Surgical Reporter.
20. The South Western Medical Gazette (Louisville).

BRITISH:—

21. The Philanthropist.
22. The Practitioner.
23. The Medical Chronicle.
24. The Medical Press and Circular.
25. The Journal of Microscopy and Natural Science.
26. The Indian Medical Gazette.
27. The Australasian Medical Gazette.
28. The Hospital Gazette.
29. The Journal of Rhinology.
30. The Birmingham Medical Review.
31. The Ophthalmic Review.
32. The Pharmaceutical Journal.
33. Public Opinion.
34. Health.
35. The Chemist and Druggist.
36. The British and Colonial Druggist.
37. The Australasian Journal of Pharmacy.
38. The Nursing Record.
39. Diet and Hygiene.

FRENCH:—

40. Journal de Medecine de Paris.
41. L'Union Médicale.
42. Le Progrès Medical.
43. Bulletin Général de Thérapeutique.
44. Gazette de Gynecologie.
45. Gazette Hebdomadaire des Sciences Medicales.
46. Journal de L'Ouest.
47. Journal du Nord.
48. Revue Pratique d'Obstetrique et d'Hygiene de l'Enfance.
49. Annales de Gynécologie et d'Obstetrique.

GERMAN:—

50. Centralblatt für Kinderheilkunde.
51. Centralblatt für Gynecologie.
52. Centralblatt für Chirurgie.
53. Illustrierte Monatschrift der Artzlichen Polytechnik.
54. Der Fortschritt.
55. Fortschritt der Medicin.
56. Chemiker Zeitung.

ITALIAN:—

57. Lo Sperimentale.
58. Rivista Italiana.
59. Rivista Internazionali di Medicina.

PORTUGUESE:—

60. A Medicina Contemporanea.

RUSSIAN:—

61. Vrtach.

SPANISH:—

62. Rivista Clinica de Barcelona.

TURKEY:—

63. Revue Medico-Pharmaceutique (Constantinople).

THE Provincial Medical Journal:

A MONTHLY REVIEW OF MEDICAL SCIENCE, LITERATURE, AND BIOGRAPHY.

VOL. VII.]

NOVEMBER 1, 1888.

[No. 83.]

Our Portrait Gallery.

D. HACK TUKE, M.D., F.R.C.P., LL.D.

THE condition of the insane in modern times contrasts very strongly with that in vogue in the year 1827, when Dr. Hack Tuke was born, and still more so with the barbarous treatment prevalent in 1792, when his great grandfather, William Tuke, projected the Retreat for the Insane at York. The name of Tuke will ever be inseparably connected with the philanthropic school which initiated the humane and scientific treatment of our time. Dr. Tuke is the son of Samuel Tuke, Esq., the well-known author of the work on the York Retreat, the publication of which in 1813 caused an extraordinary sensation, and led ultimately to a Parliamentary enquiry into asylum abuses.

He resided at the Retreat from 1847, familiarising himself with asylum life, and after studying at St. Bartholomew's, and under Dr. Conolly at Hanwell, he qualified in 1852. In the following year he visited the principal asylums in France, Germany, Austria, and Holland, publishing an account of them in the *Journal of Psychological Medicine*, and in an essay on "The Progressive Changes which have taken place since the time of Pinel in the Moral Management of the Insane," to which a prize was awarded by the Society for Improving the Condition of the Insane. He had in the meantime been appointed Assistant Medical Officer, and subsequently Visiting Physician to the Retreat. He was Lecturer on Mental Diseases at the York School of Medicine. He succeeded Dr. Laycock as Physician to the Dispensary. When on the staff of the Retreat he prepared, in conjunction with Dr. Bucknill, "A Manual of Psychological Medicine," which has been largely used as a textbook in England and America. At an early period Dr. Tuke's attention was directed to Mr. Braid's experiments, and he applied the phenomena of hypnotism to the elucidation of certain forms of insane delusion, in an article published in the *Journal of Mental Science*, 1865, entitled "Artificial Insanity, chiefly in relation to Mental Pathology." His work, "Illustrations of the Influence of the Mind upon

the Body," has passed through several editions, and been translated into French and German. He removed to London in 1874, where he continues to practise as a mental physician. In 1882 appeared the "History of the Insane in the British Isles," which detailed the successive steps by which the present satisfactory condition of lunatics in Britain has been reached. The history of the Royal Hospital of Bethlem, of which Dr. Tuke is a Governor, receives special notice in this work. Dr. Tuke is the editor of the *Journal of Mental Science*, conjointly with the superintendent of that hospital, Dr. Savage. In 1881 he was elected President of the Medico-Psychological Association of Great Britain. In addition to a treatise on "Sleep Walking and Hypnotism," Dr. Tuke has published the results of a visit more recently made to asylums in Canada and the United States. The exposure of the bad condition of certain hospitals in Canada has already borne good fruit in the colony. The Medico-Chirurgical Society of Montreal passed certain resolutions in support of Dr. Tuke's statements, maintaining that they were "in every material respect true and well founded; that they showed a most lamentable state of things as regards the general, and especially the medical management of these institutions, and that it was the imperative duty of the Provincial Government to institute a thorough investigation by competent persons into the entire system of management of the insane poor in the Province" (*Canada Medical and Surgical Journal*, 1884). An Act was subsequently passed by the Canadian Legislature with the object of removing the evils referred to.

His principal works are "Prize Essay on Insanity," 1853; "A Manual of Psychological Medicine," 1st edit. 1858 (conjointly with Dr. Bucknill); "Illustrations of the Influence of the Mind upon the Body," 1st edit. 1872, French edit. 1886; "Insanity in Ancient and Modern Life, with chapters on its Prevention," 1st and 2nd edits. 1878; "Chapters in the History of the Insane in the British Isles," 1882; "Sleep Walking and Hypnotism," 1884; "The Insane in Canada and the United States," 1885; besides numerous articles in the medical journals.

Original Communications.

THE TREATMENT OF URETHRAL STRICTURE BY RAPID DILATATION WITH LISTER'S GRADUATED SOUNDS.

By A. W. MAYO ROBSON, F.R.C.S.,

HON. SURGEON LEEDS GENERAL INFIRMARY; HON. CONSULTING SURGEON BATLEY HOSPITAL; LECTURER ON PRACTICAL SURGERY AT THE YORKSHIRE COLLEGE.

THE treatment of urethral stricture by rapid dilatation with Lister's graduated sounds, either used primarily or after preliminary treatment by filiform bougies, has proved so safe and so very satisfactory in the cases that have come under my care that I thought it might prove of interest to give a record of a series of difficult cases thus treated. I emphasise the word "difficult" because I am not including in the list simple cases which could be treated by any method of dilatation, and of which I have, during the same period, treated a considerably greater number than is represented in the list here described. As a matter of fact, only difficult or complicated cases of stricture are admitted into the infirmary, the simpler cases being treated as out-patients; hence, in the hospital cases related below, it will be noticed that in some there was complete retention; in others, the urine was passed guttatum, or in a very fine stream; whilst in several, the bladder emptied itself partially or wholly through fistulæ. In many of the cases attempts to give relief before admission had resulted in false passages, or in failure to reach the bladder.

The treatment usually adopted, unless the symptoms are too urgent to admit of delay, is to give an aperient, to order a diluent alkaline beverage, to put the patient to bed for twenty-four hours, and then to ascertain the exact size and site of the stricture or strictures. If a small sized Lister's sound can be passed—say No. $\frac{1}{2}$ —it is "pushed home," thus dilating to No. 3; then No. 1 will easily pass, and on being "pushed home" dilates the stricture to No. 4, and so on until No. 13 or 14 is reached at one sitting, and usually within five minutes. A hot blanket is at once thrown around the patient, and usually no shiver occurs; but if it do, hot drinks are given, and quinine and boracic acid in frequent doses.

If no firm instrument can be passed, a filiform bougie is used, and if a straight one fails to find the route, a cork-screw-ended bougie will often succeed. This is then tied in for forty-eight hours, when a larger one can easily be passed, and afterwards Lister's sounds. It is important to bear in mind, when the treatment is commenced by continuous dilatation, that the bougie must not fit the stricture, but must be quite free, and that its end must not project far into the bladder. Sir H. Thompson's very fine catheters are useful in these cases; but I find, as a rule, that when I can get never so fine a catheter through, I have no difficulty in going on to full dilatation.

If there be impassable stricture, with retention, a serious operation may often be averted by performing supra-pubic aspiration, with a fine needle once or twice, when, probably within twenty-four or thirty-six hours, dilatation will be possible, as in cases 31 and 35. Sometimes, as in cases 15, 21, and 27, after a filiform bougie has found the way, No. $\frac{1}{2}$ Lister's sound will pass without waiting for forty-eight hours. My patients are always taught before being discharged, how to pass a soft bougie *à boule*, about No. 9, for themselves, and they are duly warned of the results of neglecting to pass it occasionally. I tell them to pass it once every week on going to bed. I need hardly say that

in using the fine firm instruments I make it a rule to hold my instrument very lightly, to be guided altogether by touch, and *never* to use force.

The notes of my hospital cases have been furnished to me by my late house surgeon, Mr. H. Smith, and my present house-surgeon, Mr. Berkeley G. A. Moynihan.

Case 1.—N. F.—, æt. fifty-nine, cabinet maker, admitted into hospital September 8th, 1884, suffering from retention of urine, the bladder being distended to the umbilicus. He had had gonorrhœa twenty years previously, and difficulty in micturition during the past twelve months. There were two strictures, one three and a half inches from the meatus, the other in the perineum. A filiform bougie was passed, and left in over the night; next morning Lister's sounds were passed from 1 to 14; a slight rigor occurred. When discharged on September 20th, he could easily pass a No. 12 bougie for himself, and was directed to do it every week.

Case 2.—J. K.—, æt. forty-eight, a gardener, admitted into the Leeds Infirmary May 24th, 1884, for traumatic stricture situated at the junction of the scrotum and perineum. He had to micturate every hour, and could only pass water guttatum. A filiform bougie was passed, and immediately afterwards Lister's sounds from 1 to 14. He was discharged passing a No. 12 bougie; but failing to do this regularly, the stricture relapsed and was excised some months afterwards, a perfect cure being the result. The case was reported in the *British Medical Journal* for March 7th, 1885.

Case 3.—S. S.—, æt. forty-three, a miner, admitted June 16th, 1884, suffering from perineal fistula, the result of stricture four inches from the meatus. He had been aware of the stricture for ten months; and for many months the greater part of the urine had been passing the fistula. He was dilated with Lister's sounds, 1 to 14, at one sitting, and was then taught to pass a catheter for himself every time he required to make water. When discharged, the urine all came the right way, and in a full stream.

Case 4.—J. T.—, æt. thirty-two, a wherryman, admitted July 4th, 1884, on account of frequent micturition and great difficulty in passing water, which came in a very small stream. He had had gonorrhœa eight years previously, and had had great difficulty in passing urine six months. He had three strictures, the first two inches from the meatus, the second three inches from the meatus, and the third in the perineum. Lister's sounds were passed from 1 to 14, and he was discharged passing a No. 9 bougie for himself.

Case 5.—I. V.—, æt. fifty-nine, labourer, admitted September 8th, 1884, on account of great difficulty in passing water. He had had gonorrhœa thirty-four years previously, and difficulty in micturition eighteen months. Lister's sounds, 1 to 13, were passed, and three days afterwards 1 to 14. A slight rigor occurred after each dilation. He was discharged on September 16th, after being taught to pass a No. 10 bougie.

Case 6.—J. C.—, æt. forty-four, a painter, admitted December 9th, 1884, on account of perineal fistula dependent on stricture. Nearly all the urine passes through the fistula. He had had gonorrhœa twenty years previously. The stricture was dilated from $\frac{1}{2}$ to 13, and he was taught to pass a soft catheter every time he wanted to make water until the fistula had healed. When discharged on February 10th, 1885, only a few drops of the urine came through the fistula.



*Yours truly
D. Hack Tufke*

Case 7.—T. F.—, æt. twenty-six, a labourer, admitted May 21st, 1885, with the bladder distended nearly up to the umbilicus, the urine dribbling away drop by drop. He had had gonorrhœa eight years previously, and urinary trouble during the last seven years. Stricture was found four inches from the meatus. The urine was alkaline, sp. gr. 1025, and contained pus and albumen. On the first day he was dilated by Lister's sounds from $\frac{1}{2}$ to 7, when a catheter was passed and the bladder emptied. On the third day he was dilated up to No. 13. When discharged on June 4th, he could hold his urine for four hours, and could pass it in a good stream.

Case 8.—J. H.—, æt. thirty-six, a labourer, admitted February 26th. Had had urinary trouble for five months. When admitted no instrument could be pressed into the bladder, but as urine came in drops, he was kept in bed, and ordered an alkaline medicine. On March 1st a fine filiform bougie was passed and tied in. On March 4th he was dilated by Lister's sounds from 1 to 13, and after being taught to pass a No. 10 bougie for himself, was discharged the same day.

Case 9.—T. H.—, æt. forty, a miner, admitted Feb. 26, suffering from great pain with frequent desire to micturate but with inability to pass water except in drops. He had had gonorrhœa sixteen years previously, and urinary trouble fifteen years. After a hot bath, the finest filiform bougie was passed; it could only be borne for a few hours. The next day it was passed and left in for twelve hours, after which he was dilated by means of Lister's sounds from 1 to 13.

Case 10.—B. R.—, æt. thirty-eight, a wherry driver, admitted February 27th, 1885. Micturition guttatum. Stricture six inches from meatus. History of gonorrhœa six years previously, and urinary trouble during the past year. A fine bougie was passed on the day of admission and retained in two days, when a larger one was passed. On March 4th he was dilated by Lister's sounds up to No. 13, and allowed to go home the next day.

Case 11.—G. D.—, æt. forty-three, a labourer, admitted January 30th, 1886, suffering from penile stricture, and passing a very small stream, with considerable pain. History of gonorrhœa twenty years previously, and urinary trouble during the past year. A very fine bougie was passed, and two days afterwards Lister's sounds from 1 to 13 were passed. Discharged, passing a very good stream.

Case 12.—J. D.—, æt. forty-nine, a gardener, admitted June 12th, 1886, his urine constantly dribbling away drop by drop. He had had gonorrhœa twenty years previously, and urinary trouble during the past five years. A very tight stricture was found five and a half inches from the meatus. No instrument could be passed at first. He was put on alkaline treatment and kept in bed, and on the 20th the finest filiform bougie was passed. On the 23rd he was dilated by Lister's sounds, from 1 to 12. A slight rigor occurred. He was discharged on July 3rd, passing a good stream, and able to use a soft bougie for himself.

Case 13.—B. L.—, æt. sixty, a maltster, admitted on November 1st, 1886, with a distended bladder, the urine constantly passing by drops. He had had incomplete retention for a fortnight, and had had more or less urinary trouble for six years. A very tight stricture was found five and a half inches from the meatus, through which the finest bougie was passed and left in; this caused great constitutional disturbance, and had to be withdrawn. A

few days afterwards an anæsthetic was given, and Lister's sounds were passed, from $\frac{1}{2}$ to 13. A rigor followed. On admission, the urine was alkaline, and contained pus and albumen; when discharged on November 23rd, he was passing a good stream, and the urine was acid and free from albumen and pus. He could use a bougie for himself.

Case 14.—H. J.—, æt. fifty-six, a mechanic, admitted May 20th, with penile stricture, which was at once dilated by Lister's sounds, from 1 to 13. He had had urinary trouble ten years, and was discharged passing a good stream.

Case 15.—J. M.—, æt. twenty-nine, a hackler, admitted October 4th, 1886, passing urine in drops. He had had gonorrhœa eleven years previously, and urinary trouble during the past six years, caused by a stricture of the bulbous urethra. A fine filiform bougie was passed, and left in over the night. The next morning the stricture was dilated, from 1 to 13, by Lister's sounds. He was discharged passing a good stream, and was taught to pass a bougie for himself.

Case 16.—W. M.—, æt. forty-eight, japanner, admitted January 23rd, 1886, suffering from retention from perineal stricture. He had had gonorrhœa twenty-two years previously, and urinary trouble twenty years. A hot bath was given, and the stricture was dilated by means of Lister's sounds, 1 to 13, directly after the bath. When discharged, he was passing a good stream.

Case 17.—J. M.—, æt. twenty-five, a joiner, admitted Jan. 26, 1886, with his urine constantly dribbling. He had had gonorrhœa five years before, and had had urinary difficulty for three months. A stricture was found five and a half inches from the meatus; it was dilated by Lister's sounds from one to 12, after he had been resting two days in bed. When discharged, he was passing a good stream.

Case 18.—J. R.—, æt. forty-three, labourer, admitted January 30th, 1886, suffering from micturition. The urine, which contained pus and albumen, could only be passed in drops. He had had gonorrhœa twenty years previously. Only a No. $\frac{1}{2}$ bougie could be passed, and it was left in two days, and replaced by one rather larger. On the fourth day the stricture was dilated by Lister's sounds, up to No. 13. When discharged, the urine was normal, and he was passing a good stream.

Case 19.—F. R.—, æt. twenty-four, a fisherman, admitted on account of perineal fistulæ, through which nearly all the urine passed, and in front of which was a very tight stricture. Under ether, Lister's sounds were passed, from $\frac{1}{2}$ to 13, and a soft catheter was tied in the bladder for a few days; after which he was taught to pass himself a catheter when he required to make water. When discharged on February 20th, the perineal opening had nearly closed, and nearly all the urine came the right way. He had had perineal section done the year previously.

Case 20.—A. R.—, æt. 26, a mechanic, admitted November 16th, only able to pass with difficulty a very small stream. The stricture was found three and a half inches from the meatus. He had had gonorrhœa three years previously, and had had urinary trouble during the last six months. The stricture was dilated by Lister's sounds, from 1 to 13. A slight rigor occurred after dilatation. When discharged on November 12th, he was passing a good stream, and could use a No. 10 bougie for himself.

Case 21.—W. S.—, æt. sixty-four, a striker, admitted June 15th, 1886, with tight stricture three inches from meatus. History of twelve years' urinary trouble. The stricture was dilated by means of Lister's sounds, from 1 to

12. When discharged on June 26th, he was passing a very good stream.

Case 22.—W. W—, æt. thirty-four, a forgerman, admitted December 1st, 1886, with dropping micturition and albuminous urine. Stricture was found six inches from meatus. He had had gonorrhœa five years previously, and difficult micturition for twelve months. A fine filiform bougie was left in for half an hour, and then Lister's sounds were passed, from $\frac{1}{2}$ to 12. When discharged on December 8th, he could pass himself a No. 10 bougie.

Case 23.—J. C—, æt. twenty-nine, admitted January 10th, 1887, on account of frequent micturition and inability to pass but a very small stream. He had had gonorrhœa twelve years previously, and urinary trouble for five years. A stricture was found five inches from the meatus; a filiform bougie was passed, and left in four days. The stricture was then dilated by Lister's sounds up to No. 13. There was a rigor after dilatation. When discharged on January 26th, he could pass a No. 9 bougie *à boucle*.

Case 24.—T. S—, æt. fifty-five, a watchman, admitted January 27th, 1887, on account of urinary trouble, which caused very frequent micturition. A stricture was found six inches from the meatus, and another in the penile portion. He had had gonorrhœa in youth. The stricture was dilated at once by Lister's sounds from 1 to 13. When discharged on February 4th, he could pass himself a No. 10 bougie.

Case 25.—W. S—, æt. sixty-five, a striker, admitted April 12th, 1887, with urine dribbling constantly. He had had urinary trouble twelve years. A stricture was found three inches from the meatus; Lister's sounds were passed from 1 to 13.

Case 26.—A. E—, æt. fifty-seven, a shoemaker, admitted April 20th, 1887. Urine could only be passed in drops. The whole urethra seemed roughened and narrowed. A fine filiform bougie could only be passed at first, and this was left in for several hours, and replaced by a larger one, until No. 3 Lister's could be passed, when the urethra was dilated to No. 14. When discharged on May 3rd, he could easily pass a No. 10 bougie for himself.

Case 27.—S. B—, æt. fifty-seven, a weaver, admitted June 18th, 1887, on account of frequent micturition and inability to pass a stream larger than a knitting needle. He had had gonorrhœa twenty years previously, and had had urinary trouble five years. There were three strictures, the first, one and half inch from the meatus, the second, four inches, and the third six. A No. $\frac{1}{2}$ bougie was inserted and left in five days, when the stricture was dilated up to No. 13 by Lister's sounds. When discharged on July 4th, he was passing a good stream and could insert for himself a No. 10 bougie.

Case 28.—T. R—, æt. sixty-six, a joiner, admitted June 17th, 1887, micturition guttatim; twelve years urinary trouble. Stricture five inches from meatus, a filiform bougie was left in a few hours, when Lister's sounds were passed up to full size. When discharged on July 9th, he could pass himself a No. 10 bougie.

Case 29.—W. T—, æt. forty-three, a labourer, admitted July 16th, 1887, on account of frequent and difficult micturition. He had three tight strictures, at the meatus, and two in the perineum. He had had gonorrhœa six years before, and urinary trouble five years. A fine bougie was passed and left in three hours, when he was dilated by means of Lister's sounds up to the full size. When discharged on July 30th, he was passing a good stream, and could use for himself a No. 10 bougie.

Case 30.—J. H—, æt. thirty-five, admitted August 6th, 1887, on account of retention of urine. He had had gonorrhœa twenty years previously, and urinary trouble during the last week. A hot bath was given and a fine bougie passed. In three days Lister's sounds were passed up to full size. When discharged on August 13th, he was passing a good stream.

Case 31.—T. B—, æt. forty-five, a porter, admitted October 4th, 1887, for retention of urine. He had had gonorrhœa twenty years previously, and urinary trouble ever since. A hot bath was given and a filiform bougie passed and left in. On October 8th, the stricture was dilated by Lister's sounds up to No. 14, and he was discharged on October 11th, passing a good stream.

Case 32.—E. P—, æt. forty-eight, a carter, admitted September 3rd, 1887, with retention of urine, the bladder being up to the umbilicus; for some days he had only been able to pass a few drops. He had had gonorrhœa twelve years previously, and urinary trouble nine years. No instrument could be passed. The bladder was aspirated above the pubes on the night of admission, and again on the following night. A bougie was then passed through the stricture and left in three days, when it was dilated by Lister's sounds up to No. 13. He was discharged on September 10th, passing a good stream.

Case 33.—J. O—, æt. thirty-six, a labourer, admitted September 10th, 1887, passing a very fine stream every half-hour. He had had gonorrhœa ten years previously, and urinary difficulty twelve weeks. A stricture was found four and half inches from the meatus. Lister's sounds were passed from 1 to 14. He was discharged on September 19th, passing a good stream.

Case 34.—B. S—, æt. fifty-seven, admitted December 31st, 1887, on account of stricture. Lister's sounds were passed from $\frac{1}{2}$ to 14. A rigor followed. When discharged on January 7th, he could pass himself a No. 10 bougie.

Case 35.—S. E—, æt. thirty-four, admitted on account of stricture six inches from meatus. Had had gonorrhœa six years previously, and urinary trouble four years. He was dilated by Lister's sounds from 1 to 14, and discharged, passing a good stream and able to use a No. 10 bougie.

Case 36.—T. H—, æt. forty-six, admitted for complete retention of urine. No instrument could be passed. He was aspirated above the pubes, and on the following day Lister's sounds could be passed; when he was dilated from 1 to 14, and discharged, able to pass for himself a No. 10 bougie.

Case 37.—W. F—, æt. forty-four, admitted on account of difficult micturition, which had existed for several months. He was dilated by Lister's sounds $\frac{1}{2}$ to 14, and discharged, passing a No. 10 bougie *à boucle*.

Case 38.—V. F—, æt. forty-two, admitted on account of urinary difficulty, which had existed three years. He was dilated by Lister's sounds from $\frac{1}{2}$ to 14. A rigor followed dilatation. When discharged, he was passing a good stream, and could use a No. 10 bougie for himself.

Case 39.—I was asked by his medical adviser to see Mr. J—, aged fifty-nine, an obese and gouty commercial traveller, who had been suffering from urinary trouble, due to stricture, for several years. The urine having been passed guttatim for some months, and the bladder never having been thoroughly emptied for several weeks, so that his trousers were always wet from the dribbling constantly going on. The finest filiform bougie was passed and left in for two days, when a larger one was introduced; after which, Lister's sounds were passed from 1 to 13. He was

taught how to pass a No. 9 bougie for himself, and when seen a few weeks afterwards expressed himself as quite well.

Case 40.—I was asked to see Mr. B——, and to come prepared for perineal section, as he was suffering from retention, due to stricture, and no instrument could be passed. After some little difficulty, I succeeded in introducing a very fine filiform bougie with a corkscrew end, and directly afterwards succeeded in dilating the stricture, which was situated five and a half inches from the meatus, with Lister's sounds from $\frac{1}{2}$ to 13. His medical man had no difficulty in passing him a full-sized bougie from time to time.

Case 41.—Mr. C—— was sent to me by his medical man to be treated for incontinence of urine, due to apparently impassable strictures. The patient was put to bed and placed on alkaline treatment. On the second day an extremely fine filiform bougie was passed and retained for twenty-four hours, when a slightly larger one was got through. After a few days No. 1 Lister's sounds could be passed, when the urethra was rapidly dilated up to No. 14. The bladder gradually regained its tone, and in less than a month he returned to his home, and has remained well since; he being seen occasionally by his doctor, who passes him a full sized bougie without difficulty.

Case 42.—Mr. C——, æt. thirty, suffered from incontinence, due to a very tight and irritable stricture. After two days in bed, a fine filiform bougie was passed, and three days afterwards, Lister's sounds, from 1 to 14. He was afterwards able to pass himself a bougie *à boules* every week.

Case 43.—Mr. D——, æt. forty-five, suffering from retention due to stricture, was aspirated above the pubes to give immediate relief, after which, a filiform bougie was passed, and in two days the stricture was dilated by Lister's sounds up to the full size. He was then taught to pass, himself a bougie *à boules* occasionally.

Case 44.—Mr. O——, æt. twenty-six, residing in Huddersfield, called on me on account of urinary distress, due to a very tight stricture. He could not spare the time to rest, and had to return home the same night. After explaining to him that I thought there might be some little risk in his taking a railway journey soon after rapid dilatation, he said that he preferred to take the risk, rather than continue in his distressing condition. A fine filiform bougie was therefore passed after a little patient manipulation, and directly afterwards Lister's sounds, up to No. 14. He reported himself to me three days afterwards, and said that he had not experienced the slightest inconvenience. A full-size bougie was then easily passed, and one was ordered for him to employ every week himself.

I do not for one moment wish it to be thought that there is anything original in the treatment here advocated, for I know it is carried out by many other surgeons; but I cannot help thinking that cases of difficult stricture are too often treated by the knife, applied internally or externally, when a safer means is available, with moderate skill and a little patience. So far as ultimate results are concerned, I can see very little difference in the tendency to contraction between the cases thus treated and those treated by urethrotomy; for in all cases an instrument must occasionally be passed to keep the stricture from contracting. But between the dangers of the cutting and dilating operations I see a very marked difference, the method here set forth being practically devoid of danger, which cannot be said of either internal urethrotomy or perineal section,

A SKETCH OF AN HYPOTHESIS TOWARDS VITO-CHEMICAL METHODS IN PATHOLOGY AND THERAPEUTICS.

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(Continued from page 440.)

HAVING thus followed one path of the continuity of molecular action from the provisional starting point of sugar and yeast, and having seen the great variety of groups of organic bodies which are of this series, and having seen also the near correlation of such groups of bodies to the modes of health, we may now further view them in connection with certain great forms in biology—the generic types of the deviations of protoplasm or diseases. Diseases are viewed as reversions of highly differentiated compounds to more stable products, but which are not in harmony with the then-prevailing processes of the body. Let us keep in mind the infinite series of actions and motions which form part of an organism, that each and every one of them is a survival of the fittest; in other words, that each and every action of life exists in its then-present modes, in absolute correlation with a cosmic time and number of actions and forces. We have seen how small an amount of the ferment is capable of setting a-going a vast extent of action and change in organic bodies. "That which especially distinguishes these chemical reactions, set up by these various soluble, inorganic principles, is the greatness of the effect compared with the trifling quantity of the active agent." (Schützenberger, op. cit., p. 272).

Keeping in view the axiom that all disease must be orderly and in continuity with the normal rates, the principle of reversion has two great directions:—First, that structural changes, cancer, tubercle, cataract, tumours in general, etc., are natural reversions from the highly differentiated structures of the highest evolutions of the organic. I am compelled to hold that all the differentiations of the varied structures and tissues of the body are but expressions of the different modes of the molecular motions of protoplasm, with and of their cosmic environment. If we acknowledge law at all, we must not limit its operations, but make it general and universal. The forms and laws of protoplasm are eternal and infinite in power and reach. We must view cell-forms as parts of a cosmic and orderly evolution—their deviations into inharmonious modes, places of growth, or rapidity of growth, in certain individuals at certain ages, are as obedient to law as is their normal evolution, health.

Secondly, that the great fever group, embracing fevers of different latitudes, is of one great fundamental form, and that a nearly allied vito-chemical reversion to more stable compounds—inharmonious to the then existing vital rates—underlies them all. A fundamental "chill" and pyrexia belong to them. Whatever may be involved in the primary "chill" or rigor, the subsequent pyrexia must be from the splitting up of highly differentiated molecules into more elementary and stable compounds, a vito-chemical reversion.

Thirdly, a large amount of our diseases—e.g., diabetes, phosphoric acid in urine, uric acid, violet smell in urine, etc.—are obviously reversions of the highly differentiated vital compounds into more simple chemical states. As the potentialities—e.g., of the sexual function, vision, etc.—are existent in the ultimate gemmules of protoplasm, and as the nerve centres are secondary to such greater pan-diffusion, so we may fairly look for remedies to such reversions more by restoring the equilibrium of general molecular energy

than by agents applied to nerve centres. The vast physical changes of correlation which are consequent in protoplasm from "change of air and place" are the most cosmic of all our remedies, and no treatment or remedy is so powerful for lasting good in a great variety of our diseases. Slight as may seem the differences of two "airs" and "places," they are enough, in their great and essential correlations with the evolution of life, to restore the delicate equipoise of vital rates within the system, and the devolution or reversion into disease is often arrested.

Classification.—In his beautiful essay on "Method," Coleridge, in 1810, says: "But woe to that revolution which is not guided by the historic sense, by the pure and unsophisticated knowledge of the past." Coleridge sums up with this remark his survey of the political, moral, and intellectual past history and future hope of man. The profound truth of Coleridge's conclusion is grandly applicable to the philosophy, science, and art of medicine. In medicine the paths of the past lead to, and are in continuity with, the higher paths and methods of the future. In the mere sketch I have made of the correlations and continuity of the molecular potentialities of sugar and yeast cells, and of the relation of these potentialities in some of their derivatives to the symptoms of different diseases, and also to therapeutic actions, I have followed the "historic sense," and sought a method from the "knowledge of the past." But it is impossible but that the mind must seek in the classification of diseases some wider general truths as its basis than our present groups and names imply—e.g., cholera is not a "specific" disease, having one cause: on the contrary, it is allied to remittent fever, has gradations with summer diarrhoea, has followed a vast variety of "changes" in environment, of changed food-environment,¹ of changed outer environment. What is popularly called an outbreak of cholera is hypothetically best viewed as a periodic liberation of protoplasm from its higher differentiations—a death, in fact, of certain modes or properties of protoplasm; in other words, the natural evolution of "poisons," of inharmonious correlations in the amazingly delicate and complex derivatives of vito-chemical organic radicals. Just as the evolution of these "poisons" has followed varied "changes" in environment, so their further evolution has been often arrested by varied "changes" in environment. This instance of cholera will serve to illustrate the facts of: (a) The periodic heightened unstable equilibrium of protoplasm in its higher differentiations in man; (b) The amazingly delicate equipoise of the correlations of protoplasm on which life and health depend. (c) There is revealed a form or law of vito-chemical molecular disturbance as the greater basis of the disease, whose recognition must underlie all true method in therapeutics. If these observations be just, it follows that a new classification is appearing, based on some universal forms or laws of molecular vito-chemistry.

The method I have just followed in viewing cholera is true very much also in regard to yellow fever. Cholera and yellow fever cannot be classed as absolutely different diseases. We cannot now classify the varied languages of Europe as different languages; a common form is grandly the basis of all the varieties of language. And the same view which sees a form common to cholera and yellow fever will embrace other fevers of temperate latitudes. Not only must what we call "fevers" have a common form, but no absolute line

¹ It is important to bear in mind that the alimentary canal, like the skin, is in some senses an outer surface of the body.

separates pneumonia, bronchitis, dysentery, etc., from the great fever group. I have encountered an epidemic of a type of bronchial fever, highly fatal amongst young adults, in a voyage from England to Australia. In the earliest weeks the cases were a slight malaise, with a little catarrhal moist râle at bases of lungs. At this period the cases were slight, the patients being up and about. As the voyage progressed, and towards its end, when in high S. lat., the cases assumed the type of fever, and many died. The epidemic could not be grouped under any specific name. I have seen well-marked typhus evolve, after depressing influences, both in the young and middle-aged. I occasionally see fatal cases of continued fever here, which neither by temperature nor *post-mortem* examination are typical typhoid, and which are border-land of existing classifications. I have seen cases which fairly might, by different observers, be grouped either as bronchitis or as fever.

There is a præstage of bronchitis, and of pneumonia, and of fevers, which often has very much in common as to symptoms, etc. It is hypothetically just to hold that a nearly related hypothetical Form is common to the group, which will form a wider circle of classification than the words bronchitis, pneumonia, pleurisy, fever, etc., convey.¹ We know of epidemics of pneumonia, of bronchial fever, of dysentery; and we certainly know of infective dysentery.²

I am not now about to attempt the vast and at present impossible task of sketching a new basis of classification,

¹ E. P—, æt. sixty, a fine, active man, of highly sensitive temperament, and who for some years could recognise now and then an occasional intermittence of the pulse. He was of active habits, and walked briskly without distress. On May 23rd, 1880, he remarked, after an evening walk, that he felt unusually well. He had a rigor in the night. At 11 a.m. on the following morning I found him collapsed, in cold sweat, almost pulseless, and with most irregular action of the heart. A slight pleurisy developed at the right base. The heart continued irregular, but without any signs of endo- or pericarditis. He died of suffocative bronchial râles on the 29th. What was the pathology of this case? Probably fatty heart existed. The pleurisy was very slight. The man was struck with death from the rigor. His expression of countenance on the morning after the rigor showed certain death. No name in our present classification meets the case. I believe that a dissolution of protoplasm happened, as indicated by the rigor; that vito-chemical changes in the molecular modes of protoplasm happened; and that "poisons" evolved, and of which the cardiac disturbance and pleurisy were minor sequelæ. I have seen seemingly similar rigors followed by continued fever. The generic vito-chemical disturbance which the rigor revealed, and of which the rigor was a symptom, is the greater factor in the pathology of such cases.

² C. G—, æt. 45, left here to meet his brother, who landed at Southampton from Bombay, having returned from Bombay with dysentery. C. G— returned to Plymouth, and suffered a severe and typical attack of acute dysentery. The late Deputy-Inspector-General Thomas Stratton, M.D. Edin., R.N., gave (in the *Edinburgh Medical Journal*, January, 1850) an account of an outbreak of dysentery on board the emigrant ship *Laurel*, of 808 tons, on a voyage from London to Quebec. The *Laurel* sailed on April 7th, 1849, and reached Quebec on May 30th, after a passage of fifty-three days. The *Laurel* carried 225 passengers, and had forty-nine cases of dysentery. After a careful and full analysis of all the cases of dysentery—as to the time and place of the first cases, the parts of the ship most affected, and as to its greater prevalence in certain families—Dr. Stratton says: "I consider that some of the cases arose from infection, and for the following reasons—(1) The second and next few cases occurred in the berths next to the one where the first one occurred; (2) the complaint prevailed more on one side of the deck than on the other, and more in some parts than in others, and most in the worst ventilated parts; (3) it attacked a number of members of certain families, while about an equal number of families were exempt; (4) it attacked only two of twenty-nine unconnected individuals, thus prevailing less among them than amongst those who were accompanied by their families; (5) the cabin passengers were exempt from it; (6) the crew, with nearly similar diet, and greater exposure to cold and wet, both in their beds and otherwise, were totally exempt from dysentery." (*op. cit.*, p. 44-5).

but have cited the above instances as illustrations of a parallelism in the general method of great groups of different diseases to the method of other organic evolutions, such as species, genera, etc., in all of which the absolute "specific" is non-existent; but rather, it is true that those groups which have been held to be "specific" are but gradations, and contain a major Form in common. It appears, further, that there is a parallelism, or an approach to the method and phenomena of animal pathology, in the continuity and derivatives, or organic molecular motions and energies, which I have viewed. But if some great living form of molecular energy and motion, as pervading life in health and disease, be suggested from the study of the organic chemical series, one may say that it is absolutely revealed by the phenomena of pyrexia. We must admit that all life is one great form—one great orderly evolution, in correlation with cosmic existences and energy. We must admit that all the high differentiations of the body are absolutely orderly—are the necessitous results of the cosmic energy and its correlations, and that they are the outcome of orderly law. All the higher differentiations—sight, hearing, perception, memory, etc.—are so far contained in the primary protoplasm, and *à fortiori* in the yet more ultimate energy or motion, which, with and of cosmic environment, goes to life. Thus also 98.4° is the result of the eternal and infinite correlations and actions of the cosmic conditions of life. Just as the sexual energy is so far contained in every gemmule of the animal or plant, so the conditions which make for 98.4° are pan-diffused in the organism. The manifest and important nerve centres which control in some degree 98.4° are but partial differentiations of the hypothetic pan-thermogen.

An hysterical young woman had a temperature of 107° at 9 p.m., and normal at 10 a.m. the following morning. A case of tetanus runs up to 110° . In such cases no obvious tissue change is traceable;¹ but we know that such changes of temperature, such evolutions of heat and energy, *must* absolutely correlate with *changes* in action somewhere. Must we not hold that in such cases every bit of protoplasm, from the blood up to its highest differentiations, is involved as thermo-genetic. In Dr. Brackenridge's case, temperature at 111° suddenly evolved and suddenly absorbed. Can such pan-diffusion of the heat be explained by the circulation of the blood? The oxidation of the blood in the lungs, the metabolism of muscle, the cycloidal rotation of red discs (Surgeon-Major Woollcombe's B.A. Reports for 1881, 6, 7) may seem to account for 98.4° ; but such causes do not appear to meet the sudden pyrexia of tetanus or hysteria, and both these without discoverable tissue change.² I am

obliged to hypotheticate the splitting up of certain ultimate molecules of protoplasm as the cause of pyrexia. We live in an atmosphere of inert N; but yet the same N, in its chemical combinations with H O C, contains in the transformation of its molecules, the greatest energy and power we know of in nature. The energy of nitro-glycerine $C_3H_5N_3O_9$, when by a blow, and its consequent heat and nearer contact, its equilibrium is disturbed, is due to inter-molecular chemical changes. "In nitro-glycerine . . . the two sets of atoms . . . are in one and the same molecule, and the internal combustion is essentially instantaneous" (Cooke's "New Chemistry," p. 251).

$\begin{array}{c} \text{H} \quad \text{O} \\ \quad // \\ \text{H}-\text{C}-\text{O}-\text{N}=\text{O} \\ \quad // \\ \text{H}-\text{C}-\text{O}-\text{N}=\text{O} \\ \quad // \\ \text{H}-\text{C}-\text{O}-\text{N}=\text{O} \\ \quad \text{O} \\ \text{H} \end{array}$ <p>Nitro-glycerine.</p>	$\begin{array}{c} \text{H}-\text{O}-\text{H} \\ \text{H}-\text{O}-\text{H} \\ \text{H}-\text{O}-\text{H} \end{array}$ <p>Water.</p>	$\begin{array}{c} \text{O}=\text{C}=\text{O} \\ \text{O}=\text{C}=\text{O} \\ \text{O}=\text{C}=\text{O} \end{array}$ <p>Carbonic dioxide.</p>	$\begin{array}{c} \text{N}\equiv\text{N} \\ \text{N}\equiv\text{N} \end{array}$ <p>Nitrogen gas.</p>
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I cite the example of nitro-glycerine merely to illustrate the vast potentialities of organic bodies under molecular changes. I conceive that such facts fairly point to an hypothesis of pan-thermogeny; that in the complex and unstable, fatty, albuminoid, etc., bodies which make up the organism, molecular changes are the main base of pyrexia. And further, we may hypotheticate that in the great variety of the compounds, having different molecular potentialities, which are found in the body, there is a parallelism to the different types of disease which have a somewhat constant degree of pyrexia.³

There are surely indications of a deep classification of diseases (fevers, inflammations, etc.) based on the molecular potentialities of organic molecules. Our hypotheses of the laws of the evolution and correlations of the so-called elements, and *à fortiori* of the organic molecules, are too recent and imperfect for us to see the full Form of pyrexia. I have but glanced at the domain; nevertheless, I hope that I have looked in a right method.

Chill.—The hypotheses I have stated seem to have support from the phenomena of chill. Chill is the primary (as yet recognisable) fact in most fevers, inflammations, etc. But what is chill? I again assume a pan-irritability and sensibility in the protoplasm of the organism. The perfect harmony of health is the non-sensation when the thousand and one processes of life correlate or equipoise. Doubtless a praestage of unstable equilibrium of vito-chemical composition may (and does) exist, and thus many changes of environment, and even of emotion, etc., are followed by rigor or chill. Can chill be other than a disturbance of molecular modes in the protoplasm? May we not view the after disease—be it fever, pneumonia, herpes, cynanche, pleurisy,

bi-concave discs" (*op. cit.*, p. 24). They must have much elasticity and toughness of structure. They are seen to form "disc-like annular bodies, which are either pressing into the red corpuscular masses, or forming a basis around which these plastic masses are applying and adapting themselves" (*op. cit.*, plate ii., photo. 3). Professor Norris's discoveries seem to add force to Surgeon-Major Woollcombe's suggestions on cycloidal rotation as a source of animal heat.

¹ "Thus, albumen, which was long considered as an immediate principle, is, in fact, only compounded of many albumens, having *very nearly* the same composition, and which can only be distinguished from each other by their rotatory power, and by the temperature at which they coagulate" (Schutzenberger, *op. cit.*, p. 255-6).

¹ Dr. Brackenridge (*Medical Press and Circular*, November 30th, 1887, p. 518) records a case of "hysterical hyperpyrexia," in which "at midnight . . . three records were successively taken—the first giving 111° , the second 108° , the third 98° ."

² Surgeon-Major Woollcombe ("Brit. Assoc. Report," 1881) "advances the view . . . that the red corpuscle is, until checked by the capillaries, impressed also with rotation; . . . that the discs both translate and rotate." He further says ("Brit. Assoc. Report," 1886) ". . . that, if there be rotation of red discs, it must be wholly suppressed when the capillaries are reached, and then and there appear as heat. . . ." He further suggests ("Brit. Assoc. Report," 1881) that, owing to their "similar electric condition, the corpuscles are thus virtually isolated, mechanically, from each other, also from the liquor sanguinis, . . . thus that the discs both translate and rotate presumably *in vacuo*."

Professor M'Kendrick, in his Glasgow Address (1888), gives the total area of the red corpuscles as 3,151 square yards.

Professor Norris ("The Physiology and Pathology of the Blood," 1882) has discovered that the blood is crowded with "colourless

cholera, etc.—as kinds of *débris*? Must not our pathology look to unravel the great forms or laws of the chemistry of the organic radicals, which are, of necessity, as orderly and simple as is the chemistry of the inorganic elements?

But from another side, is an entrance being made in the unfolding of the greater law or form of vital molecular action and evolution—viz., that of therapeutics. We hold the doctrine of the absolute continuity of disease with the processes and rates of health—the continuity of the whole organic world, both vegetable and animal. We hold, further, that the so-called inorganic is of one series of evolution with the organic. There are no gaps or leaps; the order and laws of the so-far ultimate energy pervade alike the inorganic and organic domains, however varied their manifestations. If we recall the past history of our scientific ideas and knowledge, we shall perceive that the infinite mechanical motions of the universe have been reduced to one order. Many of the infinite modes of energy (the so-called physical forces) have been grouped under simple laws. The infinite varieties of the forms of plants and animals are by the ideas and laws of Goethe, Darwin, etc., being grouped under common laws. We also see that the wondrous and ever-changing phenomena of language and ideas, are being brought under the reign of law. By analogy, and with these solid bases of method, we are sure that disease and therapeutics must contain some not-yet-seen general law of continuity. The phenomena we know as pneumonia, bronchitis, fever, cholera, etc., are not the major part of these diseases; they have their præstages in recurrent unstable molecular modes. Already indications of some great laws appear in therapeutics—*e.g.*, we have seen the alcoholic radicals and derivatives run in continuity, up through the varied alcohols, ethers, oxidised alcoholic radicals, and widely-existing organic acids, compound alcoholic ammonias, compound organo-metallic bodies, ammonium cyanate, and urea; and, further, the benzyl alkaloids show a continuity with certain aromatic groups, including oil of bitter almonds, which are bodies of such great power on protoplasm; and yet, further, arise the benzol series, the carbolic, salicylic, gallic, etc., acids. The mind can never rest until it has interpreted the form of continuity in all the series, and the continuity of the series with those disturbances we call disease. As before remarked, there is a parallelism between the actions of the earlier alcoholic series of bodies and the symptoms of many diseases—*e.g.*, the stupor of fevers, of pneumonia, of Bright's disease, and, indeed, in the later stages of many illnesses; the nerve and brain functions are in a wide sense like to the results of some of the great alcoholic series. There seems to be a reversion of the molecular conditions of normal protoplasm to others, allied to those of the alcoholic-radical class. If function is held to be the most delicate and highest manifestation of that exquisite vito-thermo electric pile—a cell—then we may *à priori* look for an alliance between the molecular motions of the alcohol and opium series, and certain correlating motions of cell-contents.

Take another group—quinine. Quinine reduces temperature, and it cures or prevents ague. We assume, when quinine reduces temperature, that it then prevents or arrests the splitting up of highly differentiated organic compounds into simple ones, with its consequent evolution of heat. Its action in preventing ague *must* have *some* relation to this property. Is then the essence of ague a splitting up of

certain highly differentiated molecules? Is the first recognisable stage of ague—the chill—that condition when the earliest departure from the normal correlations and equilibrium of the molecules of protoplasm is taking place, which is recognised by the pan-irritability and pan-sensibility of the protoplasm, as chill? In their profounder Form we recognise an alliance or continuity between the different types of ague, and between these and remittent fever, and between remittent fever and cholera, etc. May we not therefore view the action of quinine as a revealer, a "migratory instance," of a "deep hidden law" of vito-molecular paths in disease and in therapeutics? When we remember that protoplasm in health and disease has in its evolution cosmic correlations, we should expect *à priori* that many conditions of change would be capable of preventing the devolution into ague. And thus we find that infusion of lemon peel (aromatic molecular motion), opium, perhaps alcohol, change of environment, arsenic, etc., are potential sustainers of normal states, and are prophylaxes.

In the field of symptoms of disease we find a great and varied class of convulsive phenomena. There are the vast varieties of hysteria, extending up to hysterico-epilepsy and hysterical episthotonos; the symptoms of tetanus from simple wounds; of epidemic tetanus; of tetanus from the administration of strychnine, etc.; of convulsions in the early stages of many fevers, inflammations, etc.; of tetanus from the inoculation of matter from animals which have died of rabies. No analysis has reached the changed modes of nerve or other protoplasm of a case of hysterical episthotonos. It is a just hypothesis, however, to assume that a molecular change has happened in such cases, which change has obeyed the same cosmic laws or forms which have produced strychnine in certain seeds. We dare not limit the continuity of the forms or laws of nature, and the mind in such instances must strive to perceive their great common molecular law.

As instances of the exquisite, yet all-powerful, power of molecular states of protoplasm in relation to disease, I may cite the life-long influence of one vaccine vesicle in preventing small-pox: the facts that the Aborigines of South Australia are obnoxious to measles and scarlet fever.

The human mind cannot rest for ever in the stage of knowing the fact that a course of mercury will cure syphilis. It must seek to know *how* the molecular actions and motions of the protoplasm are changed, both by the syphilitic juice or ferment and by the mercury. It will not rest until it perceives the continuity of the whole phenomena. We have been too apt to rest satisfied in the false finality of the word "poison." We have allowed the words "poison" and "blood-poisoning" to cover and mask our ignorance. Bacon says: "... The false appearances that are imposed upon us by words which are framed and applied according to the conceit and capacities of the vulgar sort; and although we think we govern our words, . . . yet certain it is that words, as a Tartar's bow, do shoot back upon the understanding of the wisest, and mightily entangle and pervert the judgment, so as it is almost necessary in all controversies and disputation to imitate the wisdom of the mathematicians, in setting down in the very beginning the definitions of our words and terms" ("Ad. of Learning," 2nd book, *Spedding's edition*, vol. iii., p. 396).

I have in this paper sought to indicate some lines of the order of the cosmic evolution of disease, and of the method of prophylaxis. Diseases are seen to be natural deviations

in continuity with health, and obeying, like the evolution of protoplasm itself and its higher differentiations, orderly laws. The vegetable kingdom is seen to be, even in the remedies it affords us, of one order of evolution with animal existences. Diseases and the action of our remedies are "migratory instances" which reveal to us in part the great forms of energy or motion becoming life. I have indicated a parallelism between the modes of the natural chemical bodies of the vegetable kingdom, and some of the reversions of the higher differentiated protoplasm of animals, which latter are in continuity of evolution with disease.

There have been seen sufficient grounds for seeking wider common Forms of some great groups of diseases. Our fevers, inflammations, morbid growths, phthisis, diabetes, etc., have been seen to be the results of infinitely delicate changes of mode or motion in molecular chemistry, which changes are as orderly and as obedient to law as are the most precise events of inorganic chemistry or of physics. In disease also, as in all other organic evolutions, the greatest results flow from the slow operation of infinitely delicate variations of environment or correlation. We are thus led to hope for future just and methodical therapeutics. Bacon says: "The subject of medicine (namely, man's body) is, of all other things in nature, most susceptible of remedy; but then, that remedy is most susceptible of error" (*Spedding's edition*, London, 1858, vol. iv., p. 379).

THE PRINCIPLES OF PRACTICE INVOLVED IN THE EXTIRPATION OF THE UTERINE APPENDAGES WHEN NOT THE SEAT OF TUMOUR.¹

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IN accepting your kind invitation to address you—an honour for which I am profoundly thankful—I find myself embarrassed at once by a wealth of topics and by a poverty of ability. I take it, however, that I will come nearer engaging your attention and fulfilling your expectations by discussing some subject connected with the department of practice with which I am identified. But even within that limitation I have left me a multitude of themes; for the progressive spirit of gynæcology and abdominal surgery has brought to the surface many perplexing problems of importance alike to the specialist and the general practitioner. I may be pardoned for the reflection that in many of these questions, involving considerations of operative procedure, and in which the success of the operation depends upon its timely performance, the burden of responsibility rests with the general practitioner. It is he who first sees the case; it is he who should first recognize, or at least suspect, its pathology; and it is he who should first at least suggest the necessary treatment. The future success of abdominal surgery, in its broader extensions, in this country, depends upon the recognition and adoption of this rule by physicians who are the first to attend these cases.

The improved statistics in ovariectomy now being furnished by the leading American operators is due chiefly to this phase of progress by the general profession. A distinguished English ovariectomist was once showing me a case of small and easily movable ovarian cyst. "That,"

said he, "is the way we get our patients since we educated the profession up to early operations and no tappings." In this regard our own profession is nearly as far advanced as the British. In the last five years I have not operated upon a single case of ovarian tumour that had been previously tapped, and the majority of my cases have been advised to have the operation done early. This is because our profession has grasped the principles upon which success in ovariectomy depends; and it is safe to say that it will act with similar promptness and wisdom in advising laparotomy for other conditions just as soon as the expediency of the operation and the principles upon which it is based are demonstrated with equal conclusiveness. I find myself, therefore, readily prompted to discuss to-day, in a very brief way, a no less important theme than the principles of practice involved in the extirpation of the uterine appendages when not the seat of tumour. I am not unmindful that I may be venturing in where angels might fear to tread. In abdominal surgery the accepted truth of to-day bids fair to become the demonstrated error of to-morrow. This was recently demonstrated by my distinguished friend, Grieg Smith, who found it necessary to practically rewrite his already classical work on abdominal surgery within six months after it had been out of print, so great had been the progress in so short a time. You will therefore pardon me if, at the outset, I declare that I do not to-day commit myself to any final conclusions on the questions which I may discuss.

At the outset let me emphasize a few preliminary points. The uterine appendages—ovaries, parovarium, and tubes—are in no sense vital organs. Their presence is not essential to either the life or the physical well-being of a woman. Indeed, her whole sexual apparatus appears to be tucked away in one corner of her body so as to be of the least inconvenience after having fulfilled the temporary purposes for which it was created. But even in this remote position, and whether in a state of functional activity or not, these organs sustain certain relations which make them objects of at least pathological importance; and hence it is well enough to bear these relations in mind. The proximity of the appendages to the remaining pelvic viscera and to the intestines is of less importance than the blood and nerve supply. It is therefore well enough to remember that the appendages get their blood from the ovarian arteries, and from a few anastomosing branches of the uterine; that they get rid of their blood chiefly through the Pampiniform plexus; and finally, that both arteries and veins are situated low down in the posterior fold of the broad ligaments. The significance of this arrangement is peculiar—viz., that, while displacement of these organs disturbs, their removal does not destroy, the circulation. It is also well enough to remember that the nerve supply comes from the hypogastric plexuses of the sympathetic system, and that these plexuses, in turn, are supplied with communicating branches to the lumbar and sacral ganglia and to the sacral nerves. The significance of this arrangement is that, although primarily supplied by sympathetic filaments, yet, by virtue of secondary connections with the spinal system, the appendages become central telegraphic stations whence impressions, pleasurable or painful, healthy or unhealthy, are transmitted to the remotest nook and cranny of the system. It should be remembered, too, that the function of the ovary cannot be exercised if the matrix of that organ be so hardened that the maturing follicle cannot approach the surface, nor when the white tunic becomes so toughened from disease that the egg, having

¹ An Address delivered by invitation before the Medical and Surgical Society of Western Illinois, at Jerseyville, Ill., August 1st, 1888.

reached the surface, cannot escape. And it should be remembered, finally, that the Fallopian tubes, to be of any account at all as egg-carriers, must be open at both ends. It is in these facts that extirpation of the appendages finds its chief justification; but we can spend a few minutes in further considering

TAIT'S OPERATION.

About 1868 Sir James Y. Simpson was treating all cases of retro-uterine displacement by reposition and pessaries, and he was treating all cases of retro-uterine tumefaction in which the mass could not be demonstrated as distinct from the uterus as cases of uterine displacement. The results were not satisfactory, particularly to a young assistant, who once ventured the suggestion that the retro-uterine mass might be a distended Fallopian tube (which had just been discussed in France), and that it might be removable. The idea was frowned upon by the autocrat of the Royal Infirmary. In a short time the young man sought a new field of labour south of the Tweed, and carried his idea with him. On February 11th, 1872, at Birmingham, Mr. Lawson Tait—for Simpson's assistant was no other than he—successfully opened a woman's abdomen and removed her uterine appendages. This was the beginning of the operation of extirpation of the uterine appendages for inflammatory disease, and the beginning of an intelligent pathology of what Sir Spencer Wells calls "these out-of-the-way organs." The successive revelations of pathology which have ensued upon this bold and daring step are of vast importance. We now know that so soon as the Fallopian tube becomes inflamed its fimbriæ curl inward and become sealed by plastic lymph; that the ordinary mucous secretion, finding no adequate vent through the normally narrow uterine orifice of the tube, accumulates; that if the exudation be intense, or of gonorrhœal origin, it becomes purulent; that if less intense and non-specific it remains merely mucous; that if it occur at or about the moliminal period it may be sanguineous; and finally, that if in consequence of progressive suppuration there is spontaneous discharge of the contents into the uterus the collapsed walls, now denuded of their epithelium, may become adherent. In this way we have (*a*) pyosalpinx, (*b*) hydrosalpinx, (*c*) hæmatosalpinx, and (*d*) desquamative endosalpingitis with adhesions.

And just here permit me to call attention to a point which I deem of great importance, and that is that the one condition common to all these various forms of disease is occlusion. I know no better way to emphasize this fact than by calling your attention to the specimens which I herewith exhibit to you, and which I took at random from my collection. They are the tubes and ovaries which I removed from a young lady who had been under every form of conservative treatment for over two years. You will observe that the tubes are tightly closed, and that they are distended by pus. The plastic exudation around the fimbriated extremities is extensive and well organized, and, as you observe, has fairly soldered each tube to its respective ovary. You conclude at once that, first, an ovule could not get into the tubes; next, that if it could get in it would be killed by the highly acid purulent contents; and finally, that if it could get in and could survive the pus, it could not get out. It is evident that tubes in such a fix can subserve no other than pathological purposes; that, indeed, in a functional sense they are dead, and dead, too, beyond the hope or possibility of resurrection.

The latter declaration may be, indeed, has been challenged. While in Philadelphia a few years ago, Professor

Parvin told me that during his residence in Indianapolis he had heard of a doctor living somewhere in Indiana who thought he had an idea that he could run a sound through the womb into the tubes, drain away their contents, and thus cure them. We both laughed at the vagary, and so far as I was concerned the mad proposition was forgotten until I encountered it again in the *Medical Register* some time last winter. It was from the pen of a Kansas City man that time; but I have heard nothing from him since I showed him the error of his way. In the *British Medical Journal* for April 21st of this year, I was surprised to find Dr. More Madden, of Dublin, commit himself to the same fallacy, quoting this very Indiana method of treatment as something new with himself. It was heralded as his discovery. Now, the discovery of gravitation by Newton was an accident; the discovery of the expansive power of steam by Watt was an accident; and hence it was eminently proper that Dr. Madden's discovery also should have its birth in an accident. We learn, therefore, that while exploring the uterus he was surprised "to find the sound pass in up to the handle, and on palpation to discover that it had obviously entered the right Fallopian tube." The isolated circumstance was forthwith elaborated into a new tenet of conservative (?) surgery—as practised by Madden. Now, as a matter of history, even my Indiana neighbour was anticipated in his idea by Tyler Smith, who may be pardoned for having entertained the thought when we consider the defective knowledge of pathology and surgery in his day; but even he redeemed himself by repudiating his wild fancy. It is difficult to treat the matter seriously in this day of advanced intelligence.

The objections to the proposed practice are simply insuperable. In the first place, none can tell whether he has pus or something else within the tube; while in the next, no refinement of manual detexterity will enable one to determine whether he is putting the sound into the tube or through its attenuated walls into the peritoneum. The danger is obvious. But should the tube be successfully drained in this way, it is of no account anyhow, for the distal extremity remains closed. Here we pause. We must wait until some mechanism is devised with which to disentangle the fimbriæ. We turn with confidence to the ingenuity of Madden. We shall have no surprise when we see him emerging from his seclusion with some beautiful device—combining, may be, the principles of the glove stretcher and the knitting machine.

BATTEY'S OPERATION.

On the 17th day of August, 1872, Dr. Robert Battey, of Rome, Ga., successfully extirpated the normal ovaries from a woman for the arrest of the menstrual function. The case, which was reported in the *Atlantic Med. and Surg. Journal* for September, 1872, was the first recorded one for extirpation of any part of the uterine appendages for any purpose whatever. The technique of the operator was similar to that which had formerly been practised by Thomas for the removal of small ovarian tumours through the vagina, and which he had described under the head of "vaginal ovariectomy." Battey's idea was to "arrest diseased and pernicious ovulation and to effect the change of life." It was based upon the then accepted but now fairly exploded doctrine that menstruation is necessarily dependent upon ovulation; hence the ovaries alone were removed. The operation as practised by Battey several years after its inauguration, consisted in opening the vagina through the cul-de-sac; the ovaries were dragged down by the fingers, separated *écrasement*; no ligature was applied, no drainage

tube was inserted, and the wound was left open. Blood clots which subsequently formed were raked out by the finger, and when suppuration began, as it frequently did, the peritoneum was washed out by means of a gum catheter. Three to five assistants were required, the time was generally an hour or more, and the mortality was 20 per cent. This operation is, fortunately, a thing of the past, a chapter of history. The procedure which now goes by the name of "Battey's operation" is, strictly speaking, nothing more or less than an abdominal section for the removal of the healthy ovaries alone, undertaken for the purpose of precipitating the menopause.

There are three reasons why this operation is now but seldom done, viz. : first, the removal of the ovaries alone is no guarantee of the cessation of menstruation ; second, the tubes, even when healthy, can be of no value and are only potential for mischief when left behind ; and third, the tubes can be removed with the ovaries without complicating the operation. The fact remains, however, that the ovaries, whether diseased or not, may be removed under certain conditions and the healthy tubes left behind, a mere question of remote possibilities alone being involved. The field, however, is limited.

The operation may be done with propriety in cases of rudimentary uterus, giving rise to distressing menstruation—circumstances which first induced Battey to do the operation. I have on hand a case of extrophy of the bladder and congenital absence of the vagina ; menstruation has occurred from the rectum. I can detect ovaries by rectal examination. I shall remove the ovaries and of course the tubes, too, if I can find them, as soon as the cold weather arrives. There are cases of obscure pelvic pain which depend upon chronic ovaritis. In these cases we may have interstitial induration or peripheral exudation with adhesions. The matured Graafian follicles, being unable to burst, undergo cystic degeneration. Either of these three conditions is the source of exquisite pain, constant, but aggravated at the menstrual period, and interfering to an important degree with the general health. Often these diseased organs become the nidus of more active inflammatory trouble which in turn may result in abscess. One of my fatal cases presented precisely this state of affairs. It came to me from Dr. Cook, now of the Oxford Retreat. The ovary was adherent to the pelvic wall, and just beneath the organ a small abscess had developed, which was diagnosed before operation, but which had already become the source of septic mischief before I put the knife in the case. An earlier operation would have saved her, but fortunately neither Dr. Cook nor myself were responsible for the delay.

Irreducible displacement of the ovary, the organ enlarged and hyperæsthetic, lying in the cul-de-sac and acting as the cause of dyspareunia and general ill-health, is another legitimate indication for the removal of at least the diseased ovary. I have done the operation in several cases, all of them successful not only as to recovery from the operation, but as to ultimate results.

[Dr. Reed here exhibited a number of specimens from his cases illustrative of the pathological conditions to which he had alluded.]

THE "SPAYER" AND THE "NEURO-GYNEATRIST."

There are certain other cases for which removal of the ovaries alone is practised and which I would really prefer not to discuss, but candour impels me to the task. When Battey christened his operation he called it "normal ovari-

otomy," thus implying that it was intended for the removal of healthy ovaries ; and Goodell made bad matters worse by speaking of the removal of the appendages as "spaying,"—an absurd misnomer. At any rate, the idea of removing healthy ovaries for the relief of pain led others to remove them for other nervous phenomena ; there presently grew up a serious abuse of the original idea of Battey, and doctors were to be found all over the country who were, in very fact, "spaying" women for the relief of hysteria, epilepsy, hystero-epilepsy and allied nervous disorders. The recording angel alone knows the mortality. Conservative gynæcologists on this side of the Atlantic called a halt. The Birmingham school planted itself firmly upon the proposition that none but manifestly diseased appendages should be removed. This edict has been accepted. We now remove the appendages—ovaries or tubes as may be—in those cases only when, on exploratory incision, we find them the seat of gross disease, and we resort to exploratory incision only when the symptoms point strongly to an ovarian or tubal origin of the disease.

But those of us, of the more conservative turn of mind, who feel that we have been somewhat instrumental in establishing these limitations to the practice, and who feel that we have just delivered the unfortunate neurotic from the hands of the wanton "spayer," are not yet relieved of our solicitude. We see the fair object of our concern drifting into other and more terrible snares. Our friends, the alienists and neurologists, inform us that women's diseases, "their antecedents and sequences, have a peculiar fascination for the neurologist." The wily nerve doctor, to put himself in line for these cases, proposes to transform himself into a "neuro-gyneatrist." This specialist, *sui generis*, has only been christened and has not yet become a potent factor in womb affairs. Preparations for activity have only gone to the extent of arranging an artistic vocabulary. From the specimens at hand one could easily fancy that the victim of an obscure pelvic pain, on consulting the "neuro-gyneatrist," would be informed that as a matter of fact she had a "visceral neurosis," which, although a "gynecasic disease," was yet one which existed chiefly in its "neural and psycho-neural factors ;" or, to be more explicit, she has "inherent neuropathic degeneracy," the combined result of "ancestral nerve overstrain" and "acquired neuropathic decadence ;" that as a final result there exists "nerve apathies" and "sequent neurasthenia," associated with more or less "afferent nerve insensibility" and "central motor atonicity ;" and that, manifestly, she is in need of treatment which will excite the "contractile tonicity of transmitted peripheral excitation over the vasomotor neural mechanism of the pelvic viscera." Then the poor woman, after she recovers from her faint, naturally seeks shelter in the private sanatorium of that next product of progressive evolution in specialism—the Psycho-Neuro-Gyneatrist !

EXTIRPATION OF APPENDAGES V. APOSTOLI'S TREATMENT FOR MYOMA.

But while we decry "spaying," and laugh at the "neuro-gyneatrist," there are circumstances under which the removal of the normal appendages for their influence upon at least a part of the nervous system, is found to be a most beneficial expedient. I allude to cases of uterine myoma. There has grown up a strange misconception of the way

¹ C. H. Hughes, M.D. "Neural and Psycho Neural Factors in Gynecasic Disease." *Alienist and Neurologist*, April, 1888.

this operation effects a cessation of the hæmorrhage and a reduction of the size of the tumour in these cases. The prevalent impression is that the circulation is cut off. A moment's reference to the anatomical *résumé* given at the beginning of this address will show that the ovarian arteries are not touched in this operation, nor are any of the important vessels lying deep in the folds of the broad ligament. The interception of the vaso-motor nerve supply is the more plausible explanation. But whatever may be the *rationale* of the operation the fact remains that as an alternative to hysterectomy it has proven a life-saving measure. Thus, in the Spark Hill Hospital from 1879 to 1886 inclusive, the removal of both ovaries and tubes was practised in 91 cases of myoma with 87 recoveries; while during the time, in the same institution and by the same operators, 42 hysterectomies yielded but 25 recoveries. But notwithstanding this excellent exhibit, ablation of the appendages in these cases promises to be superseded by the Apostoli treatment. I myself have passed through three epidemics of electricity. Another one is now upon us.

I acknowledge that I am affected with a mild form of the disease. The potter's-clay electrode is a feature of my equipment. I am free to admit that I have seen myomata grow smaller and hæmorrhage cease under its use; and in other cases I have seen it fail completely. I, however, feel encouraged, and my conservative instincts lead me to hope for the ultimate success of the treatment, providing, of course, that the ascertained results shall show it to be safer as to primary mortality, and equally satisfactory as to ultimate results. But this exhibit has not yet been made; and until it is it may be well for us not to abandon the old for the new.

REMOVAL OF APPENDAGES IN PUERPERAL PERITONITIS.

A more recent extension of this department of surgery has come about through a knowledge of the condition of the appendages in puerperal and purulent peritonitis. I have not yet had the opportunity of doing this operation, although I proposed it in a case of abortion at two months. It was on the third day and the temperature was 104°, with extreme tenderness and some tympanites low down in the belly. The attending physician was not convinced of "the new pathology," as he termed it, and for lack of his cordial support the operation was declined by the patient and her friends. The case died three days later. I herewith present to you the uterus and appendages, which were removed at the autopsy. You will observe that the tube on one side presents a typical pyosalpinx of long standing, and that its walls are extremely dark and obviously gangrenous. There is here, near the occluded distal extremity, a slight perforation which bears evidence of having been an ante-mortem condition. Now, what relation did this perforation bear to the purulent peritonitis which proved fatal in this case? The tube on the other side is also occluded, but from the recent lymph about the fimbriæ and from the character of the contents, the probabilities are that occlusion took place only after the inception of the inflammation following the abortion. If, now, the gangrenous appendages had been removed and the peritoneum washed out and drained, there would have been a strong probability of recovery. I have recent private advices that Professor Tait has lately had eight consecutive recoveries under this line of treatment. Dr. Thos. Savage recently presented to the British Gynecological Society (*British Gyn. Jour.*, April, 1888), appendages which he had removed from a

case of puerperal peritonitis. The ovaries were found enlarged and black; the intestines matted together by recent lymph, and the abdominal cavity contained a pint or more of non-offensive purulent fluid. "Medical men," he said, "were becoming alive to the necessity of calling upon specialists to operate, but they experienced difficulty in deciding when and at what period they would be justified in doing so." He then advised that all lying-in cases having feverish symptoms should be operated upon so soon as fluid could be detected in the abdomen; and I accept this as the principle which, for the present, must guide us in undertaking this class of cases.

REMOVAL OF APPENDAGES FOR INTRAPERITONEAL HÆMATOCELE.

The splendid pioneer work of Dr. Francis Imlach, of Liverpool, in establishing the relation of extraperitoneal hæmatocele to ruptured tubal pregnancy, has made us familiar with another set of conditions under which extirpation is practised. He found rupture of the tube to be the underlying condition in the majority of all cases of intraperitoneal accumulation of blood, and he removed the appendages for the purpose of controlling the bleeding point. He reported sixteen successful cases two years ago. I had the pleasure of reporting my first successful case to the Ohio State Medical Society in 1887, and I have since had two more cases, both successful. The operation is simplicity itself. Open the belly; scoop out the blood clots; wash out the peritoneum, and remove the appendages on the affected side. As compared with the let alone treatment operative interference presents a small mortality—only two deaths in sixty cases which I have collected. If we are to judge of an operation by its results we may fairly state that this one has earned a place in surgery; and if we are to consider the pathological necessity for an operation we may say that in this instance it is simply imperative.

THE "UNSEXING" OF WOMEN.

There is a phrase of this discussion which must not be omitted. It is made important by the recent utterances of gentlemen no less prominent than Dr. More Madden to the effect that extirpation of the appendages for conditions such as I have been describing, unsexes women and deprives her of the power of propagation; and I am apprehensive that the delusion is entertained by other very respectable members of the profession who have not looked into the matter. I feel that from what I have already said, and from the specimens which I have already exhibited, you are convinced of the absurdity of the idea. As a matter of fact the operation could not deprive a woman of her fecundity, for the very good reason that the incurable disease with which she is afflicted has already deprived her of that function, and there is no possibility of its restoration. But I presume reference is had to the notion that following the removal of the ovaries there is a decadence of the sexual appetite. In the first place this is a mistake, and has been denounced as such by every operator of importance, including both Battey and Tait, who have pointed out that the removal of painful organs from the pelvis is promotive rather than destructive of sexual feeling. But grant that it were true. Is a woman to go through life racked with pain that she may satisfy the lust of a man? The proposition is too repulsive to be discussed in decent society, yet this is logically just what Dr. Madden is teaching. There are others, doubtless, who are prompted to advise

against operation for the reason that the conservative line of treatment is vastly more remunerative to the practitioner; but I don't know that this view helps matters much, for it amounts only to a choice between pruriency and venality.

EXPLORATORY INCISION.

It were idle to say that diagnosis of these "out of the way" organs is easy. As a rule, it cannot be made at a single examination, but has been arrived at after a study of the case embracing numerous examinations and covering a considerable period of time. Often the diagnosis cannot be carried beyond the point of presumption without an exploratory incision. Here is another point on which the profession has gone into error. Mr. Tait inaugurated exploratory incisions for the purpose of confirming presumptive diagnosis, and announced the definite limitations under which he did the operation; but the profession at once exclaimed, "Tait says when you don't know what is the matter with a woman cut her belly open and see," and many of them did so. Now, Mr. Tait never said anything of the sort; but he did say "that in every case of disease in the abdomen or pelvis, in which the health is destroyed or life threatened, and in which the condition is not evidently due to malignant disease, an exploration of the cavity should be made." In this Mr. Tait shows a spirit, not of recklessness, but of marked conservatism. I have, for instance, successfully removed a 30-lb. sarcomatous tumour of the ovary in a case in which the symptoms of malignancy were evident; and the records of Spark Hill furnish another instance. The time has gone by when hands must be kept off all malignant cases. The law might therefore be changed to read: "when the condition is not evidently due to manifestly *irremovable* malignant disease."

CONCLUSIONS.

In conclusion, then, let us answer the inquiry. When should the general practitioner advise extirpation of the uterine appendages?

1. In cases in which, after adequate investigation, he is assured that there is intra-tubal accumulation.
2. In cases in which, from congenital deficiency of some of the organs, there can be no healthy exercise of the menstrual function.
3. In cases of chronic ovaritis, giving rise to intolerable pain, and in which cure has been demonstrated as impracticable by conservative means.
4. In cases of irreducible displacement of the ovaries giving rise to severe pain.
5. In cases of large uterine myoma giving rise to dangerous hæmorrhage, and in which the electrical treatment has failed after a reasonable trial, and finally, in which extirpation of the appendages can be practised with greater safety than hysterectomy.
6. In cases of puerperal peritonitis and intraperitoneal accumulations in which, after opening the abdomen, the appendages are found diseased.
7. In cases of intraperitoneal hæmatocele in which, on exploration, a bleeding point is found in a ruptured tube.
8. Exploratory incision should be advised in all cases in which any of the foregoing conditions are reasonably suspected, and in all cases "of disease of the abdomen or pelvis in which the health is destroyed or life threatened, or in which the condition is not evidently due to" irremovable "malignant disease."

FROM GENERATION TO GENERATION: A PRELUDE TO THE STUDY OF HEREDITY.

By R. A. DOUGLAS LITHGOW, LL.D., M.R.C.P. ED., F.S.A.,
F.R.S.L., ETC.

(Concluded from p. 449.)

Summary.—Heredity, as we have seen, is one of the fundamental laws of living Nature, by which all organic beings tend to repeat themselves in their progeny, and it underlies the grand evolutionary processes by which, according to the Darwinian theory, all organic beings have been produced. The effects of this great law have been recognised and appreciated from the earliest ages; and, while the axiom of Lamarck that "like produces like" may be true as a generalization, yet the tendency to variation which is manifested in all animals—as resulting in the differentiation of individuals—is so potent as to frustrate the attainment of the ideal law.

The office of Science consists in the interpretation of natural laws, by means of the study of phenomena in relation with experience. Heredity is a physiological necessity of our being inseparably connected with reproduction, and the mysterious source of both may be traced to the fusion of the sperm and germ cells, resulting in a germinal vesicle. Analysing the human organism somewhat in detail, it is found that the likeness between parents and children, although by no means absolute, characterises not only every element of their form, features, and expression, but also every action, every function of their physical being, extending even to the transmission of idiosyncrasies, habits, and acquired modifications, so that every anatomical conformation—every physiological function and process—the varieties, and the minutest peculiarities of the individual in structure, composition, and properties, are alike found to be subject to the grand law of heredity.

The correlation and interdependence of the laws of heredity and variability are well recognised in the great evolutionary theory of Darwin; and the so-called laws of heredity, under which all the main facts are usually grouped, may be thus briefly formulated:—

- (1) Direct Heredity.
- (2) Reversional Heredity or Atavism.
- (3) Collateral or Indirect Heredity.
- (4) The Heredity of Influence.
- (5) Specialised or Initial Heredity.

Between physiology and psychology there exists not only an intimate correlation but an exact parallelism. The Brain is the organ of the Mind, and thought but the result of brain action; and as the brain, as regards its size, structure, and qualities is hereditarily transmissible, we are warranted in asserting that every mental or intellectual state is conditioned by a pre-existing physiological state, and that psychological heredity has its source in physiological heredity. Like all other groups of natural laws, physiology and psychology are simply terms used to denote the groupings of certain phenomena which experience has enabled us to perceive are reducible to law. The physiological phenomena concern consciousness, but inasmuch as every mental condition implies and necessitates an antecedent physical condition, there is of necessity an intimate correlation between both. Thus the functions of the spinal cord, the medulla oblongata, the cerebellum, are performed unconsciously, and even the brain itself is capable of unconscious cerebration.

Proceeding from the unconscious towards the conscious,

we find that instincts, owing to the fact that the psychical as well as the physical nature are unquestionably transmitted from parents to their children, are hereditarily transmissible; so also are the modes of sensorial activity denominated the perceptive faculties; as every deficiency, or extraordinary development of any of the senses are indubitably passed on from parents to their offspring. To these latter must, moreover, be added memory and imagination, which are likewise potentially transmissible by heredity. Are the higher, like the lower modes of intellect, transmissible? As the unity of the intellect is recognised and admitted by all schools of thought, and as facts undoubtedly prove the heredity of the lower intellectual modes, it must follow as a natural sequence that all the higher forms of the human intellect are also subject to this law. If we regard intellect and reason from a transcendental point of view, they transcend experience, and are thus beyond the sphere of science; but if we consider them phenomenally, there is no reason why they should be exempted from the law of heredity, and thus considered, they are without doubt inherited.

In like manner the sentiments and passions are also transmissible; and if we avoid all polemical discussion as to free-will and heredity, the human will, regarded phenomenally—that is with regard to the immense resolution, boldness, courage, self-confidence, and mastery over the timid and irresolute which characterise the possessors of strong wills—is also unquestionably hereditary; so too the evolution and fixation of national characteristics are primarily the result of heredity. From this rapid and imperfect summary it will be seen that all that we *have* and *are*, as individuals constituted for the performance of certain functions, we owe to heredity, with the exception of the developing influences of our “environment” through life, and the educational processes to which we have been subjected.

Having thus far proved the inheritance of man's physiological and psychological nature in detail, I discussed the individuality of man as developed by the interaction of heredity and variability, and showed that however perfect the likeness transmitted from parents to their offspring, it is never either originally or dynamically exact; and however closely the *partus* may resemble the *parens*, physically, mentally, or morally—however closely the former may resemble the latter with regard to temperament, idiosyncrasy, diathesis, and hereditary predisposition—yet each child preserves its own individuality by reason of the differentiation produced by natural variability, to which every organic being is subjected, in addition to heredity. Remembering that each one of us has inherited certain peculiarities—physiological, psychological and pathological—which we, in turn, shall pass on to our descendants, I thus sought to prove the reason why every individual differs in these respects from every other, and why those peculiarities which distinguish us from one another in health should also tend to modify or intensify our relative proneness to certain morbid affections, by the neutralisation or development of the morbid susceptibilities or predispositions which have been transmitted to us.

Defining *diseases*, in the abstract, as not entities, but mere groups of modifications of structures already in existence, and of actions always progressing in a vital system—in fact particular conditions of the living body, new phases of its vital manifestations, whether of the nature of functional derangement or organic or textural degeneracy—I was led to

conclude that the differentiation of individuals concerns not only their physical nature and functions, their mental qualities and moral character, but also their morbid processes, whether functional or organic. In other words, as the physiological and psychological nature of every individual—inherited and acquired—differs from that of every other, so too must every individual differ from every other as to his pathological predispositions. Thus, whether we consider man physiologically, psychologically, or pathologically, we find the potency of heredity in his every aspect, and so far as this influence extends there is an exact parallelism between physiology, psychology, and pathology; they are, in fact, names denoting man's organism and dynamism in health and disease, both of which I contend, in disease as in health, are essentially subject to the law of heredity.

In considering what is meant by predisposition, I discussed it under the following heads—viz., hereditary, ætal, sexual, and acquired, and showed that it consisted in a peculiar state of the physical and mental constitution of every individual, mainly hereditary, which renders him specially liable to suffer injuriously from the effects of certain morbid agents, and when these latter are of a non-specific type, predisposition will determine the particular disease which it shall induce in each of several individuals similarly exposed to it: whilst in the case of a specific agent or morbid poison, it determines the relative liability of several individuals similarly exposed to it, to become the subject of the particular diseases it is capable of originating, and also influences the severity of its attack.¹ In other words, just as every individual differs from every other physiologically and psychologically, so he differs from every other in his predisposition to disease, and all these differences are the result of heredity and variability. Predisposition is, in fact, a tendency, mainly hereditary, in the tissues or organs of the body to readily assume certain morbid processes, in the presence of certain exciting causes, and may thus be regarded as the result of a minor degree of heredity to that in which certain morbid conditions are actually transmitted. There is probably no individual in existence who has not inherited some predispositions to disease, and we thus see that heredity and variability influence man physiologically, psychologically, and pathologically, in fact, as in health, so also in disease. Instead of a predisposition, it may be an insusceptibility to certain diseases which is inherited, but this latter can only be regarded as an effect of the same causes working differently, as they do in every individual—producing in one a predisposition, in another an insusceptibility. Regarding, then, hereditary predisposition to disease as a scientific fact, and bearing in mind that none of us are free from its influence—since it is also scientifically correct to say that every atom and function of man's physical and mental nature are also subject to heredity—it assuredly must follow that the same atoms and functions are liable to certain morbid processes in consequence of the same influence, especially as diseases are merely particular conditions of the living body, new phases of its vital manifestations, whether of the nature of functional derangements, or of organic or textural degeneracy. To sum up: man, physiologically and psychologically, to the minutest detail, being subject to the law of heredity, it must follow that he has also inherited certain predispositions to disease which, in the presence of certain exciting causes, will develop into

¹Dr. W. B. Carpenter,

active morbid processes : in a word, man is alike subject to heredity in health and in disease.

In addition to hereditary predisposition, we find that the individuality of man consists also of temperament, idiosyncrasy, and diathesis. How do these latter affect the predisposition to disease in individuals? The temperaments are the sanguine, nervous, lymphatic, and bilious. The sanguine predisposes to diseases characterised by the rapidity of the inflammatory process, and predisposes its possessors to acute affections, which develop themselves regularly and completely, defervesce rapidly, and generally with well-marked symptoms of crisis. The nervous temperament predisposes to disorders of the nervous system, convulsive diseases, various congestions and hæmorrhages, hepatic and internal obstructions, neuralgia, insanity, and melancholia. The diseases to which the lymphatic temperament predisposes are generally of a chronic character, and of an asthenic type, as debility, tuberculosis, scrofula, and dropsy; and the bilious temperament tends to dyspeptic affections, hypochondriasis, and hepatic derangements generally. The temperaments are types of inherited physical and mental constitution, and are generally "mixed" in different individuals, while one may predominate. That they predispose to disease we have just seen. Idiosyncrasies, always inherited, also predispose to disease, or may produce insusceptibility. There can be no doubt that they depend upon peculiarities of physical structure. They predispose to certain morbid processes, as, for example, the specific or exanthematous fevers. It may be an extraordinary immunity that they reveal, or an incredible degree of susceptibility, and they account for the various degrees in which different individuals are affected by scarlet fever, small-pox, typhus and typhoid fever, diphtheria, erysipelas, syphilis, carbuncle, etc. "There are few of us without our idiosyncrasies, and their variety is innumerable."¹

The diatheses are of still greater importance, consisting as they do of morbid proclivities existing in an individual or family, in consequence of his or their heredity and environment; or, still better, "of any condition of prolonged peculiarity of health giving proclivity to definite forms of disease."² I adopted the classification of Mr. Jonathan Hutchinson because it is founded on a scientific basis, and is in accord with the natural history of disease, and considered in detail the following varieties:—The three universal diatheses, viz.: the scrofulous or tubercular, the rheumatic, and the catarrhal. The two climatic, viz.: the malarial, and the bronchocele. The four dietetic, viz.: the gouty and hæmorrhagic, the leprosy, the scorbutic, and the rachitic; and, after these the diathesis of malignant new growths, the diathesis of senile degeneration, the visceral diathesis, etc. It would be very easy to add to these in every direction, but those referred to suffice to show that my object has been to include diathetic diseases in such groups as bear upon their long descent by heredity, and not the elaboration of a mere detailed classification, which I could have readily supplied by exercising a little ingenuity. Without recapitulating the details of the various diatheses considered, I shall now content myself by repeating that, as the so-called Laws of Nature represent merely the grouping of certain phenomena, so diathesis may be regarded as the grouping of certain constitutional peculiarities, having certain pathological tendencies, in certain families or individuals; and, as every individual differs from every other, in every

respect, we must naturally be prepared to admit a similar differentiation with regard to his diathetic peculiarities. Diatheses are, in fact, but rough types of constitutional peculiarities, showing a predisposition to certain diseases, and which may be variously blended in different individuals, while the original type is more or less preserved.

It should, however, be remembered that the temperaments, idiosyncrasies, and diatheses, however influential as factors in modifying morbid processes in individuals, receive their force and character from heredity, and may thus be said to be merely effects of hereditary predisposition specialised in certain sets of individuals; but hereditary predisposition means far more than the temperaments, idiosyncrasies, and diatheses, for it not only includes all these, but also implies that a morbid predisposition which has arisen in some individual, whether ancestral or parental, has, by heredity, been transmitted to his offspring, and either intensified by descent, or modified by age, sex, or accessory circumstances. In speaking of diseases as hereditary, I do not mean that the diseases themselves occurring, either in ancestors or parents, are actually transmitted to their offspring (who, under those circumstances, would be born with them), but what is really meant is that a certain organic constitution is inherited by the children, which being likely to undergo pathological development in the ordinary circumstances of life, is therefore described as a constitutional predisposition or tendency to disease.

If it is admitted, as I have indicated, that every individual is subject to heredity in his physical, mental, and moral constitution, and to such an extent in his physical organisation that the minutest structure of his every organ and tissue is characterised by it; it seems to me but a natural sequence that the life-history of his parents' organs and tissues will be re-enacted, to some extent, at least, in his own, and that when they have developed organic or tissue derangement or degeneracy of any kind, he, too, will at least have inherited a predisposition to the same. This, I think, may be accepted as a broad statement of a general truth—the truthfulness of which is not assailed even when we consider the effect of such modifying factors as individual varieties of age, sex, and circumstances.

With the object of inquiring how far this view is supported by the records of experience, and of actual disease, I passed in careful review the majority of the diseases "which flesh is heir to," including intra-uterine diseases, diseases of the circulatory and nervous system, of the respiratory organs, the kidneys, the chylipoietic system, the liver, chronic and acute infectious diseases, diseases of nutrition, and of the locomotive organs, of the special senses, and of the skin, and the result is now before the reader. If my examination has served no other good, it has, at least, established in my own mind the accuracy of the views herein enunciated, and I can only hope that the mass of facts which I have brought to bear on the affirmative side of the question may, at least, serve as an inducement for other observers to take a livelier interest in the subject. As far as the groups of diseases which I have considered are concerned, it seems to me that the facts recorded prove beyond a doubt that children inherit from their parents not only their physiological and psychological nature—modified in every case to some extent by variability—but also a predisposition to the constitutional diseases or disorders from which they have suffered, and that, in disease or in health, heredity is a factor of prime importance.

¹ Mr. Jonathan Hutchinson.

² Ibid.

So far as I am aware a systematic attempt has never before been made to trace the influence of heredity as an important factor in the origin and development of the diseases which afflict humanity, and if the facts which I have adduced tend to prove that heredity influences them all, and that *because* we owe our organic nature—all that we *have* and *are*, with the exception of the influences of our environment—to this universal law, *therefore* our morbid predispositions spring from the same source, I shall be well satisfied. I have sought to establish a parallelism between physiology, psychology, and pathology as representing man in health and disease, and I think I have succeeded in showing that heredity governs these three aspects of his organic nature and its condition. Be that as it may, heredity is a fundamental and universal law of living Nature, and there can at least be no doubt that the entire physiological and psychological nature of parents is transmitted, with some modifications, to their children; this being so, it assuredly follows that disorders or diseases, which are nothing more than modifications of structures already in existence, and of actions already progressing in a vital system, are likewise transmitted, and usually in the form of a predisposition with which the tissues of the children are mysteriously branded. In a word, if the physiological and psychological nature of man is inherited and transmissible, so must everything that concerns his pathology, except that which he owes to the influence of external circumstances during his "struggle for life."

Before concluding I must allude, however briefly, to another and equally important aspect of heredity—viz., that concerning the transmissibility of man's *moral nature*—and I approach this subject with considerable diffidence, feeling that I am about to tread on very delicate ground. At the very outset of every study of morals we are met by the mysterious and inextricable problem of free-will. I wish it to be distinctly understood, however, that my remarks are made in a purely scientific spirit, and entirely apart from theological dogma or doctrine of any kind. As I have elsewhere stated, if phenomena be reducible to a law, their investigation constitutes a science. Science can only deal with phenomena and experience; and when we come to regard the ultimate causes of any of these groups of natural phenomena, and find them not reducible to law, they transcend experience, and Science pauses paralysed at the very threshold of such an inquiry. But just as science can concern herself with the phenomena which are purely physical or mental, so it is her province to observe and interpret phenomena which belong to what is called the moral nature of man, in the light of experience; and so far as the purposes of this work are concerned, we may rest assured that as in the physical and mental nature of man heredity exercises a most potent influence, so it does with regard to that part of his individuality which is denominated moral. In a word, heredity dominates the whole individuality of man. In every purely scientific estimate of this individuality the moral aspect must be regarded from the same stand-point as the physical or mental, and it is here that Science and Theology have waged their fiercest battles. Ribot, in discussing the irreconcilability of heredity and free-will, says: "Clearly, there can be but two hypotheses—either we must say that at every birth there is an act of special creation, which places in each being the germ of its character, of its personality; or we must admit that this germ is the product of preceding generations, and that it necessarily comes from

the nature of the parents and from the circumstances of the generative act." Here I leave this question, having no wish or intention of discussing it, but I contend that as there is a parallelism between the physiological and psychological nature of man, so there is, and must be between his psychological and moral nature, and that they are all equally hereditary.

The moral nature of man has been developed, as his mental nature has been, by heredity acting through countless æons of time *pari passu*, and coterminously with the progress of civilisation. In his primitive state of barbarism and savagery man had no adequate idea of morality. To hunting succeeded pastoral pursuits, and to pastoral, agricultural, and it is only with the latter that we can associate the dawn of civilisation. "Primitive man, ignorant and idealess, the slave of his appetites and instincts, which were simply the forces of nature freely acting in him, rose but very gradually to the conception of the ideal. Art, poetry, science, morality, all those highest manifestations of the human soul, are like some frail and precious plant which has come late into being, and been enriched by the long toil of generations."¹ Carlyle has said that civilisation is only a covering underneath which the savage nature of man continually burns with an infernal fire; and that the philosopher was right is easily proved by the facility with which, on provocation, even the most civilised and highly educated manifest a reversion to the primitive instincts of the race, which in a moment may burst all the bonds which civilisation has imposed upon them—when the brute nature appears with all its unbridled appetites and savage passions, and reasserts itself in its primitive barbarism. For, as Ribot has well said, there exist in the bottom of the soul, buried in the depths of our being, savage instincts, nomadic tastes, unconquered and sanguinary appetites, which slumber but die not. They resemble those rudimentary organs which have outlived their functions, but which still remain as witnesses to the slow, progressive evolution of the forms of life. And these savage instincts, developed in man during the past, whilst he lived free amid the forests and streams, are from time to time recalled by heredity, as though to let us measure with the eye the length of road over which we have travelled. The basis of morals is responsibility; but heredity influences alike tendencies which are resistible and those which are irresistible, and here we are once again met with the unceasing conflict between free-will and fate, and I will only add that in this warfare, fatalism is more often triumphant than is usually admitted or imagined. Even Burdach, a staunch supporter of the free-will theory, admits that "heredity has actually more power over our mental constitution and our character than all external influences, physical or moral." To quote Ribot once more: If it be admitted, he says, that the moral act comprises a great number of ideas, judgments, and sentiments (as has been already shown by the influence of heredity on the development of sensibility and intelligence), then heredity also exerts a great influence on the formation of habits and of moral ideas—*moral heredity is only a form of psychical heredity*.

To escape, however, from theory to phenomena and experience which we can deal with in a spirit of scientific inquiry, properly so-called, and apart from metaphysical disputations which are too frequently hypothetical, the reader is referred to the earlier portion of this work, where, in considering the heredity of the sentiments and passions,

¹ Ribot.

I have alluded to tendencies to vice and crime as a heritage which descends with the certainty of fate. There is, in fact, no form of vice or of crime which may not be perpetuated by heredity, and, if space permitted, it would be an easy task to cite manifold and indisputable cases to prove this assertion. I therefore maintain that like the physical and mental nature of man, his moral nature also is transmitted hereditarily. I have no desire to separate the resistible from the irresistible tendencies which are thus transmitted, as this would involve theological arguments which I have neither the intention nor the capacity to discuss; but bearing in mind the influence of circumstances, in addition to that of heredity, in the development of character, I may be permitted to ask if our legislature and our codes of morality have adequately considered these combined influences in their efforts to mitigate the evils of crime and vice. I trow not. It must be admitted that there are many individuals to whom Nature and Life seem to have been so cruel, that they appear to have little or no chance in the struggle for existence. We have already seen that *cause* and *effect* underlie all moral, as they do all physical and mental phenomena; and when we peruse the life histories of such as these, we cannot but be impressed by the fact that Nature, by her inexorable law of heredity, has so handicapped them in the race, and Life has surrounded them with such baleful circumstances that success seems all but hopeless and impossible. One of these poor souls now and again

"Breaks his birth's invidious bar,
And grasps the skirts of happy chance,
And breasts the blows of circumstance,
And grapples with his evil star."

But alas! how many go down through suffering and crime to disease and death, God alone knowing how hard it was for them to do anything else. Schiller says "this is the peculiar curse of evil, that it must continually reproduce evil;" whilst we therefore glibly prate of 'moral responsibility,' let us trust that the All-Father may in His infinite goodness and mercy, judge us with both, and not as we judge one another. Calderon, in his tragedy "Life a Dream," puts into the mouth of King Basilius, speaking of Sigismund, the following words:—

"Though his inward disposition
Has destined him to destruction,
Still he can avoid it;
Since the most obstinate fate,
The most ungovernable desires,
The most unfavourable stars,
Are able only to direct the will,
But conquer the will, they cannot."

I cannot, however, but see that, if Nature has laws at all, they must be universal, and if cause and effect underlie all her phenomena, then there must be many to whom life has been but a curse; and although we must not therefore regard them as personally irresponsible, yet we must admit that even the strongest and the best, those whom Nature has endowed with the greatest power of resisting evil, might likewise fall and fail, thus handicapped by Nature, and amid such life surroundings.

I must confess to having no faith in that selfish, stilted theology which regards all men from the same human standpoint, ignoring in most the heritage of evil, making no allowance for the various circumstances of their lives, and pouring out the vials of their wrath upon the sinner rather than the sin. We are all differently constituted by nature, and we have all a different environment in life; and whilst remembering ever that "it is human to err," we should not forget that what may be a temptation to one man may be none at all to another, and act towards our

weaker brother accordingly. Whilst admitting that all men are morally responsible for their actions, it appears to me, in the light of heredity, and with regard to the differences of our environment, morally impossible that a God of infinite love and mercy can judge us all alike as we too frequently do each other. In the meanwhile, whilst allowing theologians to settle such disputes amongst themselves, I boldly affirm that heredity governs man alike in his physical, mental, and moral nature, whilst with variability it develops and maintains his individuality which differs from that of every other of his kind.

THE END.

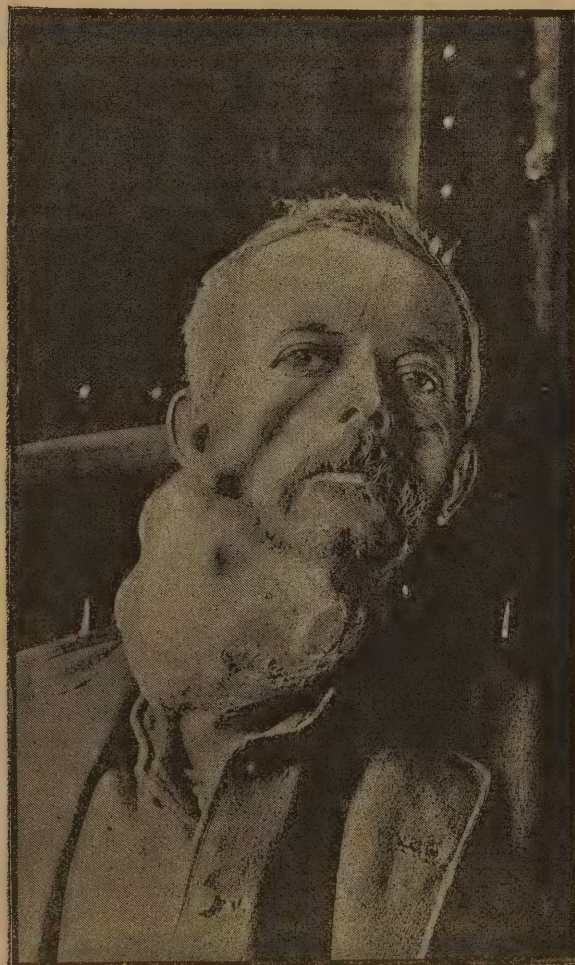
A CASE OF CYSTIC LYMPHOMA OF THE NECK.

By WM. DUNNETT SPANTON,

SURGEON TO THE NORTH STAFFORDSHIRE INFIRMARY.

It seems very probable that as the knowledge of the necessity for the early recognition and treatment of tumours of all kinds becomes more widely disseminated, such cases as that I have to record will in time be almost extinct; and it is well therefore to place them on record while they exist among us, and learn what lessons we may from them.

Samuel C—, æt. fifty-one, widower, a brickyard fireman, was admitted into the North Staffordshire Infirmary



BEFORE.

under my care on August 16th, 1888, presenting the appearance well delineated in the above photograph.

The patient was a rather spare, wiry, sallow-faced man, whose previous history was good, and who bore no appearance of any constitutional disease. All the organs were apparently healthy, and with the sole exception of the tumour in the neck, which prevented him from working, and so led him to seek relief, he had no complaint to make. The family history was good: no trace of tuberculosis or syphilitic taint could be discovered; nor was there anything known of any similar tendency to glandular growth in any branch of the family. Twenty-seven years ago he first noticed a small "lump" near the angle of the right lower jaw, which at first caused no pain or inconvenience, but slowly and steadily increased in size up to the time of his admission. The right side of the neck was then occupied by a large, nodulated, movable tumour extending from the parotid region above, and reaching to the clavicle below, and pushing over the larynx and trachea to the left side. The swelling was in some parts hard and unyielding; in others semi-fluctuating; and at the lower part were two ulcerated portions of skin, around which the tumour was firmly adherent and brawny. Considerable venous hæmorrhage had occurred from the larger of these openings—so profuse, and followed by so much prostration as to alarm the patient and his friends, and to place his life in considerable jeopardy. The external and anterior jugular veins were of great size, and all the veins on the right side of the neck were turgid. His voice was rough and laryngeal, due no doubt to the pressure which deflected the trachea nearly two inches beyond the middle line of the neck. The measurements over the tumour were as follows:

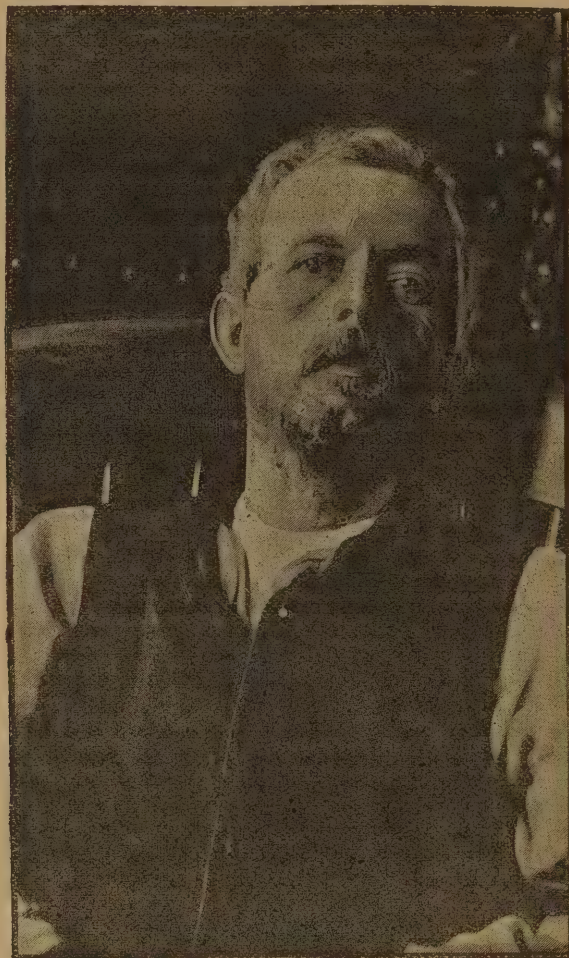
Circumference	16 inches
Transverse diameter	12 "
Vertical diameter	10 "

There were no enlarged glands elsewhere, nor was there any history of any. Excision of the tumour was advised, and to this the patient willingly assented. On Aug. 25th, chloroform being administered, I made two elliptical (nearly horizontal) incisions, including the ulcerated and adherent portions of the skin, across the entire width of the tumour, and partly by enucleation, partly by careful dissection, removed the growth entire with the unsound skin. A dense and in some places very adherent capsule enclosed the tumour, which lay upon the carotid sheath, and reached nearly to the subclavian below. Several vessels required ligature, and there was considerable bleeding from numerous veins deep in the neck; but none of the large vessels were touched. The trachea was flattened laterally, as one usually sees in bronchocele. A drainage-tube was inserted, and the wound, which was then $9\frac{1}{2}$ inches long, closed by wire sutures, and dressed with alembroth gauze.

The tumour when removed weighed $28\frac{1}{2}$ ounces, and consisted of a mass of irregular sized glandular masses in various stages of cystic degeneration and disintegration. Some portions were firm and elastic, others containing serous fluid; and at the parts from which hæmorrhage had taken place an irregular ulcerated condition. The cysts were more numerous towards the surface. Microscopically examined by our house surgeon, Mr. R. G. Lynam, M.B., it was found to consist of ordinary lymphoma tissue, fibrous stroma predominating in some parts, disintegrated gland tissue in others; but no indications of any form of malignant growth were observed.

On August 26th, the day after the operation, urgent dyspnoea came on, which was relieved by removing some

of the sutures, and allowing some blood clot to escape from the wound. The patient progressed without any symptom worthy of note; the wound gradually closed up, and he left the infirmary on September 29th presenting the appearance shown in the photograph below.



AFTER.

Gland tumours of the neck, so far as my experience extends, are by no means common unless associated with some strumous tendency. Of these we see frequent examples in the adenomata developing among strumous glands, more especially in adolescents. They do not, however, run the slow, chronic course which the true lymphoma does, and ought not to be confounded with it. Where the tumour is apparently not associated with any such constitutional origin, the question of the propriety of removal is a simple one, and no surgeon would, I imagine, hesitate to advise excision where there is reasonable prospect of its being effected with safety. The size of the growth is of far less moment in the estimate of the probable result than the connexion with adjacent parts. It is, however, quite clear that in all such cases, as soon as any symptoms occur, such as dyspnoea, or hæmorrhage, or pressure on the large nerves or vessels, we are fully justified in advising a patient to submit to the risks of an operation rather than allow him to linger on with the prospect of increasing discomfort and a certain lingering death. In the present instance it is curious to note, what indeed one frequently

sees in other ways, that the bulk, the discomfort, the dyspnoea, and so on, seemed to cause the man comparatively little anxiety, either physical or mental; but so soon as he saw bleeding occur, and became impressed with the idea of "bleeding to death," he was at once alarmed, and ready to submit to a measure which he had previously treated as outside the range of his physical politics. Some happy circumstance such as this it is by which many lives, no doubt, are saved, and nature has wisely given us the two signal lamps of pain and hæmorrhage to impress the lesson which all else had failed to teach.

With regard to the removal of glands clearly tubercular, I am by no means sure from what I have seen that it is wise as a rule to remove them. Two instances have occurred to me in which after removing a large mass of them from the neck, general tuberculosis took place, and in each instance the patient rapidly succumbed. They would appear to be in some instances a sort of safety valve through which the tubercular tendency expends its force, and in considering the expediency of operation it is well to bear this in mind. In the majority of gland tumours about the neck, whether in the lymphatic or secretory glands, there ought, I think, to be no hesitation as to the propriety of their removal as early as possible, after the failure of the ordinary remedies to influence them.

THE MICROSCOPE AS APPLIED TO FUNGOLOGY.

BY THE REV. J. E. VIZE, M.A., F.R.M.S.,
VICAR OF FORDEN, WELSHPOOL.

THE students of fungi may naturally be divided into certain groups—those who study the larger kinds only, and those who study the microscopical forms, with or without the larger kinds too. As to the first of these, there is not the need of so thorough an examination of plants all the year through, as most of the larger kinds have no solid flesh capable of enduring severe frosts. The autumnal part of the year is the most favourable for them. Again, a microscope is by no means an indispensable part of the work; therefore the manipulation of the instrument, which, like everything else, cannot be gained by magic, is not necessarily a part of the education. As to the second group, the very fact of the use of the microscope gives extra relish for investigating the small forms of vegetable life. Moreover, the small forms may be examined all the year round—each separate month may give different developments of one and the same fungus. By this means the life history may be watched and studied, and become very absorbing as well as very instructive. The task may be difficult, but, when completed, the reward for the toil and labour bestowed is well repaid. Besides, the field of investigation for the microscopical student is very much more extensive as to the numbers of the plants, than for those who only take the large forms. The increase of new microscopical fungi is immensely greater than for the other kinds, hence new species may be found more frequently. Then, again, as to preservation of species for reference, the small forms are more easily preserved for future reference than the others, whether in the herbarium or as slides, notwithstanding the fact that there are difficulties in both. The herbarium in a place liable to atmospheric changes is sure sooner or later to be attacked with some vegetable growth to damage the specimens—a source of special annoyance with unique plants—

or the ravages of insects may reduce your specimens to a powdery dust, and render what formerly was prized, equal in value to nothing. Then as to microscopical slides, there really is a great deal of trouble with them. Their numbers accumulate. This is to be met by carefully arranging them, so that when you want a specimen out of your cabinet of one hundred, or some tens of thousands, you may at once be able to put your hand upon the exact specimen you want. I have given up every plan for the following, which is to have trays of uniform size containing room for thirty-six slides each, and to have always on hand a stock of empty trays to insert here and there, as necessary, just as you would put books in your library shelves. By keeping to families, genera, and a few details, such as not overcrowding, the difficulty of arrangements become easy.

Now, as to the medium in which these microscopical slides are to be mounted. Who knows which is the best out of the numbers there are? I have worked at the microscope for thirty-five years, and cannot tell yet, nor do I think the man is born who can tell. What suits one fungus does not necessarily suit another. Canada balsam contracts the spores and is apt to contort them. Glycerine pure and simple simply refuses in course of time to remain in the cell of the slide, and works its way out. Glycerine jelly is nearly as bad, and, in common with gelatine medium, contracts and expands with the temperature of the weather, and, therefore, is unreliable. Thwaite's fluid, like water, may be very successful for a time, but will be sure to change the colour of the tissue eventually. Camphor water, and the other media which have been used in the vain attempt of beautifully balancing themselves, so as to check either the growth or decay of the plant, all fail. Nothing on earth is perfect. We may do our best, as we try to do, but success, however near, is not assured. If anyone asks me what media I should now use, and recommend others to use, my answer would be—for any fungi that would bear them (and they are not numerous) employ Canada balsam. First take the greatest possible care to keep the spores in their natural place by giving them as small a quantity, not of pure spirits of wine, which scatters them, but benzole, which has a different effect. Let the benzole evaporate, then mount. When Canada balsam will not suit, as is generally the case, I use gelatine, warming all the materials used. Water I may say is, to the best of my knowledge, indispensable when you want to see such portions of a fungus as the zoospores. Much advantage may be gained by putting on the label of the slide not only the name of the object but the medium in which the same is mounted. I have slides in my cabinet of great scarcity, which it would be next to impossible to replace. Some of them have lost the whole of the medium in which they are placed through evaporation, and are almost valueless. Others have not gone so badly, but there are large bubbles of air in them, which are the forerunners of total evaporation. Had the original mounter of the same named the fluid in which they were placed on the slide there would have been little difficulty in bringing them back to their primitive condition.

May I use words of caution to beginners? Be very careful not to use high power object glasses with high eye pieces—if you want high powers, always use low eye pieces. The strain on the eye is nothing like so great when this plan is adopted. Besides, with high power object glasses you may get any amount of magnifying power that is necessary. Again, use as little light as you well can from the mirror.

It is a very wrong motion, indeed, that a great light is essential. Always get a subdued light, one that is not in the least liable to strain the eye at all. The definition of the slide will be just as good; indeed, better—the time occupied will be much better employed because you will work longer, and the comfort to yourself at work will be considerably improved. Then, again, banish to the winds the idea that you cannot keep both eyes open when working with a single tubed microscope—monocular as it is called. There are several ways by which this may be effected:—one is by having a black sheet of paper near to the second eye; another plan is to put your hand before your eye. Perseverance is all that is needed. One evening is quite enough to make any one skilful in this respect if he is determined to succeed. He need no more fear seeing things on the table with the second eye than seeing the crown of his head, unless he is in training for drawing objects on the table by means of a camera from the instrument, whilst with one eye he looks at the object, and with the other draws the figure. A very little reflection will convince anyone how undesirable it is not to keep the nerves of the eye as nearly in their right position as possible. An undue strain is caused if they are strained, and the sight is injured if much work is done. Let us all, young and old microscopists, be very sceptical at times as to what we think we see with the very highest powers. Without wishing to detract an iota from the honesty of purpose and of truth of my fellow-students, I am sure that a good deal unintentionally has been said to have been seen with the microscope which has never been seen at all. We set to work longing to discover something newer than the last new thing. We hope to find it; we begin to think we have found it, and we may go so far as to make ourselves believe we verily did see it *once*. The event must be recorded; we proclaim it, and in so doing propagate error. The microscope, like the photographic apparatus, has its defects. Let us enjoy seeing what glories there are in it, and without hesitation use it for the best and purest purposes.

Special Articles.

THE ILLNESS OF FREDERICK THE NOBLE.

A REVIEW.

THE illness of Frederick III. of Prussia furnishes us with one of the most important medical *causes celebres* of modern times. It has excited interest in lay as well as medical circles—the details of the illness were followed from day to day with eagerness whilst the Emperor was alive. After his death the interest in the case was not allowed to die. The German surgeons attacked Sir Morell Mackenzie with a bitterness unknown in medical history—the foreign press republished the strictures of the German surgeons. Sir Morell Mackenzie felt himself compelled, by the very force of circumstances, to prepare for the reading world his version of the story. What a revelation it is! In clear and incisive style Sir Morell describes the history of his illustrious patient. We give some extracts from the work. It must certainly be of use when bound up with the annual volume of the *Provincial Medical Journal*, and will serve a useful purpose for reference. Our foreign subscribers in China, Japan, New South Wales, the Cape, America, and Australia, will also be able to read the true

version, and Sir Morell Mackenzie's fame will be rehabilitated—if it was ever weakened by the accounts previously published.

WHY THE BOOK WAS WRITTEN.

Sir Morell Mackenzie tells us in the preface:—

It has been a painful task to me to write the following pages, not because there is anything in the charges recently brought against me by some of my German colleagues, which I have the slightest difficulty in meeting, but because I feel most keenly the unseemliness of a controversy which must necessarily cause additional suffering to hearts which have already been tried beyond the common lot. Although the pamphlet issued from the Imperial Press at Berlin embodies accusations which amount to a charge of malpractice, I should have been content, so far as I am personally concerned, to leave my professional reputation to the judgment of impartial men. Under the special circumstances of the case, however, I feel it to be a duty which I owe to those exalted persons who have honoured me with their fullest confidence through thirteen months of terrible anxiety to justify the trust which they placed in me. . . Two things supported me in what otherwise would have been an intolerable position. First, my own consciousness of perfect integrity of purpose; secondly, the absolute trust and delicate consideration with which, from first to last, I was treated by my noble-hearted patient. No physician could wish for a patient more obedient to his injunctions, more full of "sweet reasonableness," than the ruler of the mighty empire of Germany. . . I have been unable, for obvious reasons, to allude to several points which, though not bearing on the purely medical aspect of the case, were yet most important factors in determining the course which was pursued. I think I have also some grounds of complaint against the Prussian Government, which, whilst allowing my adversary free access to the State archives, refused me the same privilege. As I have shown in the body of this little work (p. 207), these official sources are of a very miscellaneous character, but amongst them there are important documents relating to the case of the late Emperor which, in justice to me, should not have been kept from the public. Among others may be mentioned the protocols of Professor von Schrötter, Dr. Krause, and myself, drawn up in November, 1887, and more especially the written refusal of the Emperor, then Crown Prince, to submit to any other external operation than tracheotomy. The protocols which it is proved that Professors Gerhardt and Von Bergmann sent in to the Haus Ministerium would also furnish interesting reading, and would show what really were the views of these gentlemen before I was summoned to Berlin. The first report of Professor Virchow would also be highly instructive. I can only hope that these documents and other matters bearing on this historical case will some day be made public. I, at least, have no reason to fear the full light of day.

THE SUMMONS TO GERMANY.

The book commences with a deeply interesting historical account of Sir Morell Mackenzie's connections with the case:—

On the evening of Wednesday, May 18, 1887, as I was about to retire to rest after a day of hard professional work, I received a message requesting me to proceed to Berlin to see his Imperial Highness the Crown Prince of Germany. I started the next morning, and reached the German Capital on Friday, May 20, being met by Dr. Wegner. We drove at once to the Kron Prinz Palais. I had scarcely time to change my travelling clothes before the Hof Marshall, Count Radolinski, came to conduct me to the Crown Prince. His Imperial Highness received me most graciously, apologising with the charming *bonhomie* which endeared him to all who knew him, for all the trouble which his throat was causing to other people, and in particular for the long and fatiguing journey which it had entailed on me. . . On my venturing to suggest that it would be better that I should first confer with doctors already in attendance, thereupon I was taken to another room, where I found the following physicians and surgeons assembled: Professors Gerhardt, Von Bergmann, and Tobold; Dr. Von Lauer, physician-in-ordinary to the aged Emperor and medical director general in the German army; Dr. Wegner, whom I have already mentioned, and Dr. Schrader, another military surgeon, who occasionally acted as Dr. Wegner's deputy in attending the Imperial family. With Professor Gerhardt I was already personally acquainted, and he was known to me professionally as a physician who, in the midst of his labours in other departments of mental science, had found time to give some attention to diseases of the throat. Professor von Bergmann I had heard of in connection with the Servian and Russo-Turkish wars, and I knew that he had been called from St. Petersburg to take the Chair of Surgery at Berlin after it had been declined by Professor Bilbroth, of Vienna, and Pro-

fessor Volkmann, of Halle, to whom it had previously been offered. I had never, however, seen him mentioned in laryngological literature save as a somewhat unfortunate operator in a few cases of extirpation of the larynx. Professor Tobold's name had at one time been familiar to me as that of one of the earliest throat physicians in Germany, but in the development of the speciality he had dropped almost entirely out of notice, had grown to be little more than a *nomini umbra* to the present generation of practitioners. I confess that I felt some surprise that among those with whom I was invited to take counsel in a case of such importance there was not at least one of the leading German specialists in throat diseases. Every laryngologist could without any difficulty name several men in Germany whose reputation is not confined to their own country. Their absence here seemed to me so significant that I rather hastily concluded that the Crown Prince must be suffering from some obscure disease of which the laryngeal affection was only an accidental complication (pp. 9-11).

THE QUESTION OF DIAGNOSIS.

When I had made my examination, the other doctors and I withdrew in the ordinary way to discuss the matter. Professor Gerhardt and Tobold gave a positive opinion that the disease was cancerous, and Professor von Bergmann, though expressing himself more guardedly, substantially agreed with them. All three were unanimous in thinking that a cutting operation from the outside would be necessary for the removal of the growth; the precise nature of the surgical procedure that would be required was never, however, discussed in my presence; in fact, our consultations never reached the stage at which that question would have come up for consideration. When it came to my turn to speak I said that "there was nothing characteristic in the appearance of the growth, and that it was quite impossible to give a definite opinion as to nature without a more searching examination." I pointed out that the opinion expressed by my colleagues had been come to on what seemed to me to be insufficient grounds, and that they had omitted the most essential, and, at the same time, the most obvious means of arriving at a correct diagnosis. The first thing to be done was to pick off a piece of the growth through the natural passage and have it examined microscopically by an expert. Professor Gerhardt said it would be difficult if not impossible to do this on account of the awkward situation of the growth, and Professor Tobold expressed a similar opinion. Whilst freely admitting that the operation in this case presented exceptional difficulties, I said that I thought it could be done, and that at any rate it should be attempted. I then turned to Professor Gerhardt and said to him, "Will you try?" He replied, "I cannot operate with forceps." I then asked Professor Tobold if he would make the attempt, but he also declined, saying, "I no longer operate." These replies increased the surprise which I already felt at a case of such a nature having been entrusted to the hands of these gentlemen, for a throat specialist who cannot use the forceps is like a physician who cannot use the stethoscope, or a carpenter who cannot handle a saw. I then expressed my readiness to attempt the operation. . . The proposal came from me. My colleagues had not taken the very first step towards establishing their diagnosis on a scientific basis (pp. 13-15).

THE PRINCE AND DR. GERHARDT.

The Princesses drove home, but I had the privilege of walking back to Potsdam with the Crown Prince, who took the opportunity to speak to me very seriously as to his condition. He told me that a friend met him at Ems and said to him, "I was going to call on you, for I am grieved to hear Gerhardt says you have cancer." His Imperial Highness asked me if I did not think Professor Gerhardt had done wrong in sending him to Ems if he believed him to be suffering from cancer. I replied that I had assuredly never heard of the Ems water doing good in a case of cancer, but I ventured to suggest the possibility that the physician had been misrepresented. . . His Imperial Highness seemed extremely dissatisfied with Gerhardt, not only for his indiscretion in talking about the case, but for having sent him to Ems, though believing him to be suffering from malignant disease (p. 19). Before returning to England I learned on unimpeachable authority certain facts as to Professor Gerhardt's previous treatment of the case which made me feel more anxious about the future than I had up till then seen any reason to be. I have already said that the Professor himself had touched on the matter very lightly in my presence, and when he mentioned in general terms that he had used the galvano cautery I naturally understood him to mean that he had employed this powerful agent according to the recognised rules of surgical practice. When, therefore, I was informed that he applied the red-hot point to the interior of the larynx every day for nearly a fortnight I could hardly bring myself to believe it. In all my experience I had never heard of anyone applying the cautery to a patient's larynx oftener than once or at most twice a week, and I hardly know which to be most astonished at in the present

instance, the therapeutic energy of the physician or the endurance of the patient (p. 40). I do not hesitate to say that the treatment adopted by Professor Gerhardt was at once unscientific and injudicious. He cannot escape from this dilemma. Either his treatment was too thorough, or it was not thorough enough. If he believed the growth to be benign, the repeated burning to which he subjected it was barbarous. If, as he says, he was doubtful as to its nature, that very doubt should have stayed his hand, and have led him to invoke surgical aid much sooner than he did. On twelve consecutive days, according to his own admission, did this physician burn the Crown Prince's larynx with a red-hot wire, and again on four subsequent occasions, at short intervals. Finally, as if all this were not enough, he thought it necessary to sear the edge of of the vocal cord with a flat burner. There is no record in medical literature, so far as I am aware, in which the cautery, a most valuable agent if properly handled, was so terribly misused. *To sum up: If the growth was benign in the first instance, there is in my opinion only too much reason to think that Gerhardt's burnings must be held answerable for its subsequent transformation into cancer; if it was malignant from the first the disease was undoubtedly aggravated by the treatment* (p. 44). Shortly before their Imperial Highnesses left England I thought it my duty to lay before the Crown Princess my view as to the prospects of the Prince. I told the Princess frankly that, although at that time the affection did not seem to be of a malignant nature, it might nevertheless turn out to be so. I impressed upon her Imperial Highness that, although at the moment everything looked most promising, the possibility of an eventual unfavourable development must not be ignored. That I laid my views before the Princess in the most frank and complete way I have documentary evidence to prove, and I am quite ready to place the evidence before the President of the College of Physicians, with the Crown Prince himself and the German Ambassador acting together. I, of course, could not discuss the situation with the same freedom. Whilst encouraging him as to his condition, I was careful not to say anything of a misleading character (p. 59).

THE WORST FEARS CONFIRMED.

On the morning of November 6th, I examined the Crown Prince's throat, which I found in exactly the condition described in the reports. The mucous membrane over the left arytenoid cartilage was moderately oedematous, and of a bright pink colour. The new growth was bright red in colour, rather more prominent in the centre than elsewhere, and ulcerated on the surface. Its appearance was altogether unlike that of the one which I had destroyed and the other swellings which had from time to time shown themselves in the larynx. It had, in fact, a distinctly malignant look. Without rising from my chair I informed his Imperial Highness that a very unfavourable change had taken place in his throat. He said, "Is it cancer?" to which I replied, "I am sorry to say, sir, it looks very much like it, but it is impossible to be certain." I felt that evasive answers, which for the patient's own sake medical men are often compelled to give under similar circumstances, would in the present instance have been out of place. The Crown Prince received the communication with perfect calmness. After a moment of silence he grasped my hand, and said with that smile of peculiar sweetness which so well expressed the mingled gentleness and strength of his character: "I have lately been fearing something of this sort. I thank you, Sir Morell, for being so frank with me." In all my long experience I have never seen a man bear himself under similar circumstances with such unaffected heroism. He showed not the least sign of depression, but spent the day in his ordinary occupations; and at dinner-time that evening he was cheerful without apparent effort, and chatted freely in his usual manner (p. 66).

A CONSULTATION.

At my request, therefore, Professor von Schrötter and Dr. Krause were summoned to San Remo on Nov. 9th. A preliminary meeting took place in my room, at the Hotel Méditerranée, Professor von Schrötter, Dr. Schrader, Dr. Krause, Mr. Hovell, and myself being present. I gave an account of the case from the time I first had seen the Crown Prince in May till the day I took leave of his Imperial Highness at Baveno in October. Mr. Hovell then related the subsequent progress of the case from that time up to the date of our meeting. I then described the appearance of the new growth as I had first seen it on November 6th, and concluded by saying, "This growth looks like cancer." Professor von Schrötter thereupon said that after my very clear statement he had no hesitation in pronouncing the disease to be cancer. He was so sure of it that he felt there was no need for him to see the patient. Whilst thanking the Professor for this flattering testimony to my descriptive powers, I ventured to point out that it was hardly worth his while to have come all the way from Vienna to give it. I hinted that it would scarcely be treating the illustrious patient with

proper consideration to offer him a second-hand diagnosis. Professor von Schrötter then consented to go with us to the Villa Zirio, where the Crown Prince's throat was duly examined. Upon returning to the hotel to continue the consultation Professor von Schrötter wished to dictate a report *ex cathedra*; but as there was some divergence of opinion between him, Dr. Krause, and myself, it was agreed that each should give his opinion separately in writing. Schrötter affirmed that the disease was cancer, and recommended the incision of the entire larynx. Dr. Krause remarked that it appeared to him that it was highly probable that the disease was a "malignant neoplasm," but as the view of the interior of the larynx was almost completely shut out by œdema he would be glad to know whether iodide of potassium had been administered, with the object of clearing up the diagnosis by the exclusion of the presence of any chronic contagious disease. In my protocol I stated that in my opinion the disease was cancer, pointing out, however, that in the absence of microscopic evidence such a diagnosis could not be made with certainty. I therefore recommended that as soon as the œdema had disappeared a small piece of the new growth should be removed through the mouth and submitted to Professor Virchow, on whose report as to its nature any future course of action should be based (p. 70). Dr. Schmidt put forward very strongly the idea that the disease might be the result of an infection which had remained in the system for many years, and urged that large doses of iodide of potassium should be given. Professor von Schrötter here interrupted Dr. Schmidt rather warmly, saying that such a notion was "an old wife's tale" (p. 70).

THE OPERATION OF TRACHEOTOMY.

Sir Morell Mackenzie then describes the famous operation of tracheotomy performed upon the Crown Prince at San Remo.

When everything was ready the Crown Prince passed through an adjoining room into his ordinary sitting-room, where it was arranged that the operation should be performed. The bed was placed opposite one of the windows, so that there was an excellent light. Bramann proceeded to give chloroform, but as soon as the Crown Prince had become unconscious, the administration was continued by Dr. Krause, whilst I kept my finger on the pulse at the left wrist. Shortly after Dr. Bramann had made his first incision I noticed that the pulse had become very weak, and the face was blanched—in fact there were evident signs of cardiac weakness. On raising the eyelid the pupil was seen to be widely dilated. The chloroform was suspended for a minute or two, when the pulse became fairly good again, and the operation was proceeded with. After this incident Dr. Bramann seemed to become a little flurried, though not to such an extent as to prevent him from operating with skill. In opening the windpipe, however, I noticed that he made his incision a little to the right instead of in the middle line. The deviation appeared to me so slight at the time that I attached no importance to it. After opening the trachea, instead of at once plunging in the cannula, as is usually done by English surgeons, Bramann held aside the two sides of the wound for a minute or two until the bleeding had ceased, and then inserted a very large and long tube. I will frankly own that the delay in introducing the cannula seemed to me an improvement on the ordinary plan of plunging the tube into the windpipe as soon as it is opened—a proceeding which usually sets up severe spasm and cough. When the operation was completed I congratulated Dr. Bramann on his success. I have already said that in a case like the Crown Prince's tracheotomy is not as a rule a matter of any difficulty, but considering that the young surgeon was operating on his future Sovereign, and that he was not unnaturally somewhat unnerved by the catastrophe so nearly caused by the chloroform, I think he did his work very well. On leaving the room I said to Mr. Hovell, "Did you notice that the trachea was opened a little to the right of the middle line?" and that gentleman replied, "I did; but I should say considerably rather than little." On coming to himself, the illustrious patient shook hands warmly with Dr. Bramann, myself, and I believe the other doctors (pp. 91, 92).

INTERVIEW WITH PRINCE BISMARCK.

At Leipsic Prince Bismarck and several of the great State officials paid their respects to the new Emperor. After his audience with his Majesty the Chancellor expressed a desire to have some conversation with me, and I accordingly travelled in the same carriage with him to the next station. Prince Bismarck said he was most anxious that the Emperor should be spared all unnecessary fatigue, and requested me to lay down rules as to the number of interviews which his Majesty might safely grant each day, the duration of such interviews, etc. I informed the Chancellor that I had already drawn up some rules of the kind, which I had given to the Hof Marschall. Prince Bismarck further said

he would be glad to assist me in every way to save the august patient all worry and fatigue, and that until the foreign princes arrived to be present at the Emperor William's funeral his Majesty could remain perfectly quiet (p. 125).

PROFESSOR VON BERGMANN.

Sir Morell Mackenzie then proceeds to give in detail what occurred on the fatal day, the 12th of April. The Emperor during the night became much worse, and Sir Morell resolved to insert a tube. He goes on to say (p. 144):

As the tube which I now proposed to try was different in shape from any of those which had been used since the case had been formally given up to me by Professor von Bergmann, at San Remo, I thought that professional courtesy required that I should ask him to be present on the occasion, as I intended to do whatever was necessary with my own hands. There was really no need for the assistance of a surgeon, but it is an elementary rule of civilised medical practice that all those associated together in the management of a case should be made acquainted with the details of the treatment that is carried out. As soon as the new tube was ready, therefore, I despatched a messenger to Professor von Bergmann to request him to come to me as soon as possible, meaning of course that I was anxious to proceed to change the tube without delay. In sending off that message little did I think it would have such fatal consequences. It is no exaggeration to say that these hastily scribbled lines proved to be the death warrant of the Emperor. Had I had the slightest idea of what was to follow, I should certainly not have allowed any over-punctilious notions of etiquette to mislead me into taking so disastrous a step. At the moment, however, it appeared to be the right thing to do. The Emperor, on his accession to the throne, had appointed Professor von Bergmann to be one of his medical attendants, no doubt in deference to public opinion in Germany, and I had been repeatedly and urgently requested by the Chief Officer of his Majesty's household, Prince Radolin, to endeavour to work harmoniously with Von Bergmann, who Prince Radolin assured me was "greatly trusted by the official classes." Hence my anxiety that there should be no ground for complaint, so far as I was concerned, of any violation of the decencies of professional intercourse. It was five o'clock in the afternoon before Professor von Bergmann arrived. As soon as he came into my room I noticed that he was in a state of great excitement. Whether this agitation was due to exaggerated reports which he may have received as to the Emperor's condition or to causes of a more personal nature I am unable to say, but either from over excitement or from some other cause Bergmann behaved in a most extraordinary, indeed altogether unaccountable manner. I briefly explained the circumstances and showed him the tubes which I had got ready, though Bergmann seemed in too great a hurry to be able to listen attentively. We then proceeded to the Emperor's room accompanied by Mr. Hovell, each of us carrying several tubes. We found the Emperor engaged in writing. The inspiration was distinctly audible, but beyond this there was not the slightest indication of any difficulty in breathing. Professor von Bergmann placed a chair opposite the window and asked the Emperor to sit down on it, and thereupon, without making any remark, he quickly undid the tape which kept the cannula in position, pulled the latter out, and with considerable force endeavoured to insert one which he had in his hand and which was not provided with a pilot. The instrument was forced into the neck, but no air came through it. The Emperor's breathing thereupon became very much embarrassed, and the Professor withdrew the tube. This was followed by a violent fit of coughing, and there was considerable hæmorrhage. Professor von Bergmann next seized a tampon cannula, covered with sponge, cut the sponge quickly off, and tried to push the tube into the windpipe. Again no air came through the cannula, and it was clear that instead of entering the air passage it had been forced downwards in front of the trachea, ploughing up the soft tissues in that situation, and making what is technically known as a false passage. Again the Professor had to pull out the tube, and again its withdrawal was followed by violent coughing and streams of blood. To my dismay Professor von Bergmann then pushed his finger deeply into the wound, and on withdrawing it tried to insert another tube. He again failed, however, and again the attempt was followed, as before, by most distressing coughing and copious bleeding. Professor von Bergmann then asked that his assistant who was waiting in his carriage outside might be sent for. It seemed as if he contemplated doing some further operation, perhaps enlarging the wound, but the Emperor was saved any further torture by the arrival of Dr. Bramann on the scene. Professor von Bergmann at once yielded the case into the hands of his assistant, and the young surgeon, taking a moderate-sized cannula (No. 8 German measure), passed it with the greatest ease into the trachea (p. 147).

There had, indeed, never been any difficulty in introducing the cannula. I had inserted a tube in the presence of my colleagues, Drs. Wegner and Krause, at ten o'clock that morning, and I subsequently took it out and substituted another for it. Although both these tubes had passed quite freely and without causing either coughing or bleeding, neither of them was altogether satisfactory, and other cannulas had therefore to be procured. The Emperor coughed almost incessantly, and continued to lose much more blood for two hours after Bergmann's abortive struggles with the tube. The severity of the symptoms then began to diminish, but there was still a deal of coughing, with some hæmorrhage at intervals, till his Majesty went to bed.

Half-an-hour after the Professor's departure the Emperor sent for me, and asked, "Why did Bergmann put his finger into my throat?" I replied, "I do not know, sir." His Majesty then went on to say: "I hope you will not allow Professor von Bergmann to do any further operations on me." I answered, "After what I have seen to-day, sir, I beg most respectfully to say that I can no longer have the honour of continuing in attendance upon your Imperial Highness if Professor von Bergmann is to be permitted to touch your throat again." Bergmann's roughness was never forgotten by the Emperor, although the nobility of his nature prevented him from showing any resentment, and even from bearing that operator any ill-will. That Von Bergmann should have been under the impression that the Emperor felt grateful to him because Bramann inserted the tube, and that his Majesty should have indicated his satisfaction by "a joyful motion of his hand," and by a thankful shaking of our (Bergmann and Bramann's) hands is indeed remarkable, and would tend to show that Von Bergmann was not at the time in a condition to observe things accurately. The Emperor often referred afterwards to Bergmann's roughness, and unimpeachable testimony remains as to the opinion of his Majesty on this subject, in his own handwriting three days before his lamented death. I have not been permitted to reproduce this autograph letter, but I shall be happy to show it to anyone who has a legitimate claim to inspect it. The means of testing the truth when Von Bergmann and I made opposite statements may not always be present, but here, at least, is a touchstone of Von Bergmann's veracity. Von Bergmann says that the Emperor "thankfully shook his hands." The illustrious patient's own handwriting, on the contrary, shows that he was by no means satisfied with his treatment by Bergmann (p. 149).

SOME MEMORABLE WORDS.

In view of the serious aspect which the case was assuming I thought it right to inform the Emperor that he was in a position of considerable danger, and I ventured to hint to his Majesty that if he had any affairs to settle it would be advisable for him to do so now. The Emperor received this communication with his usual perfect calmness, and shook me warmly but gravely by the hand, saying slowly, "I am much obliged to you for telling me. I hope I shall get better, for the sake of my people." I noticed that his Majesty made a slight pause after the word "better," as if he were thinking aloud. Frederick the Noble was no doubt thinking of the enlightened and far-reaching schemes for the internal development of Germany which had been maturing in his mind through all those years of conscientious preparation for his great office. The regret for the uselessness of it all was not for himself, but for his people, who were to lose the blessing of his wise and beneficent rule almost before they had learned to appreciate it (p. 158).

THE EMPEROR FREDERICK'S CONSIDERATION.

I have said more than once that the Emperor was the most considerate of men, and I cannot forbear relating a striking instance of this quality which occurred within a few hours of his death. My sitting-room was close to his Majesty's room, but in order to reach the latter I had to pass through three rooms. In order to get to his bedroom more quickly I generally used to go along an outside balcony, so that I had only the ante-room to pass through. Just before daybreak on the morning of June 15th it was dull and chilly. In consequence, I suppose, of exposure to the air in going by the balcony I became a little asthmatic. Whilst I was changing his cannula on two or three occasions during the night, the Emperor put his hand lightly on my chest, and looked up at me with a glance of earnest sympathy, thus mutely expressing his regret that I too was suffering. Those who have much to do with the sick know well how prolonged illness often breaks down the natural framework of the character, making even those who in health were utterly unselfish come to be regardless of anything but their own suffering. Frederick the Noble in this, as in everything else, rose above the ordinary standard of humanity. Even in the agony of death he remained true to his own generous nature (p. 176).

A TRAP.

After the Emperor's death, having had no rest for nearly sixty hours, I threw myself upon my bed about 2 p.m., but I was shortly afterwards

awakened by one of the adjutants, who informed me that the Emperor and Prince von Bismarck desired to see me. I quickly arose and accompanied this gentleman to the young monarch, whom I found sitting with the Chancellor in what had previously been the adjutants' room. His Majesty received me courteously, and said that Prince Bismarck would like to speak a few minutes in conference with me. The Chancellor thereupon invited me to retire with him into an inner room, where he suggested that I should draw up a brief report on the case of the Emperor Frederick. I at once expressed my readiness to do so. The Chancellor then said: "Will you do so before you leave?" I replied, "Willingly, your Highness. I shall leave on Monday, and I will certainly draw up the document you ask for before then."

After this conversation I was extremely surprised next day when an official from the Haus Ministerium called on me at one o'clock and asked me for my report. I told him that I had not had time to draw it up. He said, "If you will dictate it to me I shall be happy to take it down," but I pointed out that such an important document could not be dashed off in that way. The official then remarked that it was most important that it should be prepared immediately as the Ministers were waiting for it. I then said, "In that case I will write it for you," and it was arranged that he should wait in the palace for the document. Within half an hour I drew up a report to the following effect:—

"Friedrichskron, June 16th, 1888.

"It is my opinion that the disease from which the Emperor Frederick III. died was cancer. The morbid process probably commenced in the deeper tissues, and the cartilaginous structure of the larynx became affected at a very early date. A small growth which was present when I first examined the late Emperor was removed by me by several endo-laryngeal operations, and though all the portions taken away were submitted to Professor Virchow, he was unable to detect in them any evidence of the existence of cancer. Examinations of the sputa made at the beginning of March by Professor Waldeyer, however, led that pathologist to believe that cancer was then present. Whether the disease was originally cancerous, or assumed a malignant character some months after its first appearance, it is impossible to state. The fact that perichondritis and caries of the cartilages played an active part in the development of the disease no doubt largely contributed to make it impossible to form a decided opinion as to its nature till quite recently. (Signed) "MORELL MACKENZIE."

When I proceeded to find the official I was surprised to find him in earnest conference with Professor von Bergmann. I handed him the report and withdrew. Half an hour later Dr. von Wegner looked in on me in my sitting-room, and said, "A *post-mortem* is going to be made; do you care to come?" I answered, "Do I care to come? How can you ask such a question?" I immediately called Mr. Hovell, and went with him to the room where the autopsy was going to be performed (p. 181).

The concluding pages are particularly interesting to the profession. They relate to professional matters of controversy, and Sir Morell discusses the reports in a trenchant style; Gerhardt comes in for very rough handling. He narrates the charges brought against him by Professor Gerhardt, and describes them as infamous. In regard to the particular charge that Sir Morell designedly extracted pieces of healthy vocal chord, Sir Morell states that on every occasion that any tissue was removed by him from the patient's larynx it was at once submitted to Professor Virchow. Sir Morell adds that that eminent pathologist pronounced every fragment examined by him to be unquestionably diseased. As to Professor von Bergmann's report, Sir Morell remarks that "it consists firstly of a narrative of facts which does more credit to his imagination than to his memory; secondly of complaints of the scandalous injustice of newspapers supposed to be inspired by me, and denials of responsibility for the still more outrageous utterances of papers supposed to be inspired by him; and thirdly, miscellaneous polemics on more or less irrelevant topics" (p. 212). Sir Morell puts in parallel columns the advantages and disadvantages of the palliative treatment and the radical treatment. With the palliative treatment (including tracheotomy) life is preserved under almost normal conditions for at least one year, and (in a more favourable state) for at least one year longer, *i.e.*,

altogether for two years. With the radical treatment (thyrotomy) life is sacrificed at once as the result of the operation in 27.2 per cent. of cases, while in over 54 per cent. death is hastened owing to the greater activity of the morbid process set up by the operation, and in these cases the condition of existence is rendered less favourable by the premature use of a tracheotomy tube necessitated by unsuccessful thyrotomy. A complete cure has been twice obtained. These two are the only successful cases which are known to have followed the operation of thyrotomy. Of thirty-five operations for partial extirpation of the larynx, fifteen proved successful, or 42.85 per cent. In regard to the total extirpation of the larynx, this operation, when not immediately fatal, leaves the patient in a state of abject misery.

The statistical tables in the book are of considerable value, and settle the question of operation. We have given lengthy extracts, but we would recommend the full perusal of the book. The extracts should stimulate the appetite for more.

"CONTEMPORARY MEDICAL MEN."

By ALFRED J. H. CRESPI, WIMBORNE.

THE publication, by the proprietors of the *Provincial Medical Journal*, of two superb volumes of "Contemporary Medical Men," containing excellent portraits of fifty of the leaders of the profession, will not only place before the country the more salient features of careers generally unfamiliar, but will enable it to form some idea of lineaments not often seen on the lay platform, nor, indeed, anywhere except in the consulting-room and the hospital. No provincial physician can be as widely known as Cardinal Newman, Dr. Guthrie, Dr. Norman MacLeod, Charles Dawson, Dr. Dale, Canon Wilberforce, and John Angell James. No London consultant can be so frequently seen as Cardinal Manning, Archdeacon Farrar, Charles Spurgeon, James Martineau, Stopford Brooke, and Bishop Temple. On receiving a copy, I turned at once to those friends who had the honour of finding a place in its pages, and almost without exception, the likeness was perfect and the biography most accurate. Then I examined with confidence other biographies on which I was not so competent to pass an opinion, and there also I found that to the best of my belief there was equal fidelity, so that I felt I could accept the remaining biographies and portraits as reliable. The engravings of our medical leaders are in many respects striking: they represent power, vigour, and freshness; and in some cases, features which a glance shows are those of genius, and which in any profession would ensure their possessors dignity and wealth. Few more useful and valuable works have been published, and I venture to predict that the proprietors will be obliged to bring out additional volumes in the course of a few years. These volumes will be prized beyond most others, for they will preserve from oblivion many facts that in a short time would otherwise be forgotten.

A successful doctor's career is not to be envied, unless one looks beneath the surface: it means hard work, heavy responsibility, and distracting professional rivalries, while it lacks the popularity and public favour which reward the leaders of other liberal callings. The unpleasant episodes connected with the last sad illness of the second German Emperor are a case in point—rivalries pushed to such extremes as actually to lead to unseemly bickerings in the very presence of the

patient sufferer, charges of incompetence and mismanagement freely bandied about, public manifestoes in which even the initiated find statements so contradictory that the only possible course is to abstain from expressing or forming an opinion—in legal phraseology, suspending judgment; while for the less cautious there is colour for the greatest discrepancy of opinion, so that Germans and English will undoubtedly array themselves in hostile camps. And if this is the fate of men of European renown, who can say that the lines fall in pleasant places to practitioners whose diversities of opinion cannot be so delicately balanced?

There is less difference in the abilities of the chiefs of the learned professions than is commonly supposed, and the qualities which raise a man to the bench of judges or to the presidency of the College of Surgeons would enable eminence to be achieved in almost any walk. Sir Walter Foster's growing reputation as a politician, and in the House, is an apt illustration, and shows that a Birmingham consultant with a reputation extending fifty miles around that town can, when no longer young as years are reckoned, change his occupation, and throw himself with ripe zeal and great determination into the far more difficult task of attempting to rule men. The surest guarantee for the ability of our governors will be found in their being recruited from the flower of all the professions, and not being, as formerly, drawn from a narrow clique, which principally rested its claims on wealth and prescription, and not on the well-tryed confidence of the nation. Those days are gone, and we may live to see the House of Commons and the Cabinet far more truly representative, and comprising a still larger number of the finest intellects of the Empire.

The greatest privilege which the doctor enjoys is, to my mind, the facilities he has of getting to know the inner life of all classes. Man is always worth studying, and no human being is without certain traits which proclaim his Divine origin. The rudest artisan, as well as the humblest peasant, present features which repay careful scrutiny, while the most illustrious rulers of mankind often exhibit littleness and bad traits that excite pity. The doctor knows his clients at their best and their worst—that is, he sees them when they show themselves as they really are, and off their guard; he therefore, perhaps, more than anyone else, can estimate the greatness and the devotion which often hide in the lowly cottage, while he sees the vices and evil passions of the great. Doctors ought to be profound masters of human nature, and should enrich the world with powerful delineations of character and with philosophical treatises which should rank among the brightest gems in our national literature. The extinction of the old familiar type of semi-amateur doctor—the man who passed through a medical curriculum, and after taking his degree did not attempt medical practice—should herald the rise of another and even more important and influential class—the men trained in the severe scientific methods of our day, who, joining to the fullest medical knowledge the broadest literary culture, should in time, by sheer force of intellect, make themselves a power in the community, quite apart from eminence in their own particular walk. Can we regard the election of Dr. Alexander Hill, one of the junior Fellows, to the Mastership of Downing College, Cambridge, and that of Dr. Guillemard to the Readership in Geography, and that of Dr. Browne to the Professorship of Persian in the same University, as earnest of the time when the ranks of medicine may again include intellectual

giants worthy to rank with Harvey, the Warden of Merton, John Locke, the philosopher, and Christopher Wren, the architect? Perhaps the value of a medical training extending over seven or eight years, as a means of developing the intellect, and fitting it for the severest strain that it can be subjected to, is often under-estimated. Surely an accomplished physician—a man of the world, well versed in ancient and modern literature—ought to be the equal of the ablest barrister.

However much medical science may advance, however rapid sanitary progress may be, the healing art must always have great influence for good or evil, according as its professors acquit themselves wisely or ill. Moreover, as long as intemperance, overwork, crime, incompetence, and hereditary weakness are rampant, so long must there be need of highly-trained medical practitioners. It may, indeed, be found that with the advance of science, and the rise of the nation to a higher level, the services of doctors will actually increase in value, and be earlier called into requisition. The doctor is especially useful in the early stages of illness: he should be able to warn, as no one else can, how to avoid those subtle causes of mischief which undermine the constitution and end in cruel suffering; and it will become more and more his province, not so much to cure as to prevent the need for cure, by showing how sickness may be prevented, and yet that "man is born to trouble as the sparks fly upward" is a law of nature. However fortunate the surroundings, happy the career, and vigorous the health, affliction must come sooner or later, and if in no worse form, in that of decay and death.

No grander rôle in life can be conceived than the relief of suffering, and it is the privilege of two professions more particularly—the clerical and the medical—to devote themselves to it, though of course approaching it from different sides. This does not exonerate other classes from taking their part—not in pauperising, not in degrading, but in helping, raising, and relieving. It is very meritorious to build hospitals, churches, and orphanages, and only within the reach of the rich; but unobtrusive, conscientious, regular visiting among the afflicted and sorrowful, that is incumbent on all. Such labours, if undertaken from pure motives and with real depth of human feeling, bless the recipient and the giver, and are among the greatest joys of life.

Whether the clergy usually do their work thoroughly, I will not pause to inquire, beyond saying that a clergyman who does not enter into the glorious character of his mission had better be a ploughman or break stones by the roadside. He proclaims himself by his very office the friend of rich and poor: he professes to devote himself for life to a difficult and noble vocation—nothing so holy and great that it does not concern him, nothing so lowly and repulsive as to be beneath his notice. He needs, beyond all other men, love, sympathy, and a mind free from worldly care and self-seeking. Well would it be did he more often display those splendid virtues, that strength of character, which his vocation demands in a pre-eminent degree. How comparatively few of them have such determination, sympathy, loftiness of aim and self-denial, that they are the centres of living usefulness! To how many is it given to inspire confidence? How often do those in need of help go to them and exclaim, "we have come for sympathy in sorrow, advice in difficulty, and strength in weakness." When a clergyman is fit for his post, he is the happiest and most fortunate of men, but though his life may be unobjectionable, his morals good, and his intentions honest, he too often conspicuously lacks

those higher qualities, which he peculiarly needs. He does his work inefficiently, and when he dies no vacant place is left in the affection of his flock: they have lost an acquaintance, a neighbour, but not *the* friend whom he should have been. In sober earnest a good clergyman, unless he claims respect simply on account of his goodness and tenderness, must be rare, because to discharge his duties with thoroughness he needs commanding ability, vast learning, and indomitable strength of character, those qualities which make a leader at the bar, or a national reputation in physic. When we do find the natural abilities, they are often marred by pride, self-importance, and lack of burning interest in the life work. With grander opportunities than any other calling, a well-established position and a well-defined sphere of action it is only too rare to find clergymen who have the capacity, although they may have the wish, to discharge their duties in the highest sense.

Medical men approach their work differently: they have to relieve bodily suffering, and only indirectly to minister to the mind diseased. Their aims are lower, their opportunities fewer, and their original motives less noble, and yet though their ranks swarm with black sheep, they often succeed in leading singularly useful, unselfish, and successful lives. If conspicuously incompetent or self-indulgent, they are discarded for rivals of greater capacity; and, fortunately for them, they are firmly held in hand by their clients, to whom they stand in greater subjection than does the vicar to his flock. Nothing can make the doctor's life pleasant—worry, anxiety, hard work and very often inadequate pay distinguish it; and the leisure and social consideration—the recognised rewards of most liberal callings—are in great measure denied him; he is occupied as is no other professional man, with more interruptions and fewer holidays. Nor is the work agreeable, except in the case of those leaders of the profession who reap a golden harvest, stand high in public estimation, and whose lightest whisper is listened to with respect. But every medical practitioner has innumerable opportunities of doing good: his superior education, command of modern scientific appliances, and the confidence he can often inspire in his clients, if he approaches them with tenderness, invest his life with usefulness, and even dignity. As with every other worker among the poor, as with the true-born clergyman, sympathy and tenderness should be the doctor's guiding principles. The feelings of the lowliest should be tenderly respected: and he should in all essentials treat rich and poor, the hospital and the private patient alike. He should put himself in the sufferer's place and feel with him. Our hospitals are noble institutions, and do a vast amount of good, but far less than they ought. Some hospital physicians and surgeons display a lack of consideration painful to witness, which retards recovery and sometimes accelerates death. In many cases, on the other hand, the honorary staff are fully equal to the exigencies of their position, and besides having great skill and manipulative dexterity, show a tenderness and compassion, a detestation of vice and coarseness, above all praise. That much-maligned individual, the medical student, has his duties towards the hospital, and he expects some consideration from the hospital and the public. It is impossible to put old heads on young shoulders, and lads will be thoughtless all the world over, but much could be done to educate students never to forget that they are gentlemen in the highest sense of showing compassion and courtesy to the humblest and poorest. The personal influence of the honorary staff could accomplish much; but the student is not always the chief

offender; sometimes the dignified physician and the surgeon of repute show a heartlessness, an indifference to human infirmities, that cannot be sufficiently condemned. If medicine is a useful calling, and hardly any will deny it to be that, it is nevertheless a most practical one, and the training of students is one of the principal functions of those hospitals to which medical schools and students are attached. Primarily, hospitals exist for the relief of suffering, and that should be distinctly kept in view, and nothing should be permitted to obscure it. Next to this come the careful training of students and the perfecting of the knowledge of the junior staff by patient observation. Sufferers should never be regarded as *material* for clinical instruction; experiments should never be tried upon them: they should never be subjected to operations of expediency, still less to operations which their condition does not warrant. Occasions undoubtedly frequently arise when new treatment may be proposed, and with advantage, and in desperate emergencies operations of a formidable and unusual character may be resorted to with propriety, and at the same time to the advancement of medical science. But never should the recovery of a sufferer be retarded, never should wanton experiments be attempted—that would be most unjust, and the experimenter would distinctly depart from his lofty vocation; he would be untrue to himself, and form habits, which would lead him to regard suffering, not as something to be relieved, but as an opportunity for experiment. Let no one suppose that I am narrowing the field, and objecting to advance. A very few weeks in any great hospital show that a large minority of the sufferers are not benefiting by legitimate and routine treatment, and in these cases, when the medical adviser felt that good was not being done, he might with propriety change his tactics, and try novel remedies and operations, always, however, for the patient's good, never primarily for the advance of the medical art, never for his own gratification, curiosity and amusement.

Our hospital system is often regarded as an outcome of Christianity. This is hardly correct, although what we understand by Christianity would, in its loftiest spirit, lead to the building of refuges for the sick and aged. Among the Aztecs, the Spaniards, at the time of the Conquest of Mexico, found hospitals in the principal cities for the relief of the sick and the permanent refuge of disabled soldiers, and surgeons were placed over them, "Who," says Torquemada with delicate irony, "were so far better than those in Europe that they did not protract the cure in order to increase the pay?" Nezahualpilli was conspicuous, in the neighbouring kingdom of Tezcuco, for the same munificent spirit in establishing in the city of Colhuacan a hospital or retreat for invalid soldiers.

What has not medicine done in our own day for the good of mankind? Have we cause to blush at any comparison between our achievements and those of other callings? And how stupendous have been the results, direct and indirect, that have rewarded some apparently obscure or unimportant discovery. For many centuries scientific students tried to find reliable and safe anæsthetics, and there can be no reasonable doubt that for at least five centuries some had been known and occasionally resorted to. But it has only been in our day that surgery and medicine have been revolutionised by the introduction and, still more important, by the constant resort to chloroform, and other members of that class. Did anyone of the pioneers in the introduction of chloroform even dimly foreshadow the results of his labours? Impossible, nor

have we yet grasped all that it will enable us to accomplish. Chloroform is one of the most extraordinary of the many unmixed blessings that have distinguished this age; it may even dispute the palm with electricity and the steam engine as the greatest advance of modern times. It has done more for the relief of suffering than anything else: it has rendered rapid surgical advance possible, and opened up a vista which the keenest vision cannot see the end of; it has removed the dread of operations, nay, it has enabled hundreds of thousands, millions rather, of sufferers to pass through operations that without its beneficent help would have been impossible. Its dangers are altogether beneath notice when fairly weighed in the balance. Surgeon McGuire, of Stonewall Jackson's army, gave it 28,000 times without a death; Dr. Chisholm over 10,000 times with equal good fortune; and the French surgeons in the Crimea administered it 20,000 without a single accident. The gigantic strides which abdominal surgery has made at the hands of Mr. Lawson Tait, and other operators of genius, and which Mr. Greig Smith, of Bristol, has so brilliantly described in his recent great and scholarly work on Abdominal Surgery, are, in the main, the outcome of its introduction. It may have terminated a few hundred lives prematurely, but it has prolonged millions. Cocaine is another boon in eye complaints, deserving special mention; it has soothed much suffering, and the objections attending its use are so trifling as hardly to call for notice. A generation that has seen chloroform and cocaine introduced into common use need not complain that it has not done its full share in alleviating human suffering.

But more remains. In addition to the better training, and let us hope greater humanity of contemporary medical practitioners, and the superior attainments of nurses, we can proudly point to other advances. Every department of medical and surgical science shows progress, and promises still more brilliant advances. The greatly lessened death-rate, the diminished sickness, the increasing frequency and low mortality of operations that would have made Astley Cooper and John Hunter turn pale are triumphs, which many contemporary practitioners in England and elsewhere have had much to do in helping on. A man who—like Lawson Tait—has performed in one year 139 consecutive cases of abdominal section without a death, and generally with the permanent relief of the sufferer, deserves honour equal to that of the foremost thinkers and rulers of the age. Such triumphs become the starting point of hundreds of other workers in the same beneficent field. Mr. Tait has the merit of saving a few hundreds or thousands of life by his own operative skill; but the example he has set, the perfect methods he has introduced, the results he has obtained, soon become common property, and before many years have passed tens of thousands of sufferers will indirectly owe their lives and their restoration to usefulness to him.

Surely in such a field there ought to be no mean rivalries, but filled with the Spirit of the Master self seeking should be forgotten; there should be a generous recognition of one another's merits: the earlier workers prepare the way; their successors, following in the same lines, accomplish even greater results, and those coming after will still find something to do. Finality is certainly not to be feared in surgical procedure in our generation, and probably not for generations to come. The doctor's vocation may be called *par excellence* the relief of suffering, and the advances

of late years have strengthened his hands, so that it now rarely happens that he cannot successfully attempt something for the alleviation of pain, although he may not always be able to cure. The confidence which the possession of such powers inspires in his clients repays him for many a hurried summons, and gives him renewed strength to persevere in his trying labours. And in this field, though so much has been done, there is promise of even more brilliant triumphs.

In conclusion, let me say that the wish to relieve suffering is no sign of weakness, or of want of intellect. Many a man, who would bear pain with heroism, acutely feels the anguish of others. Nay, to relieve suffering great strength of character not less than tenderness is needed. A man may show heartless indifference to the torment of others, and nevertheless display most contemptible and unmanly terror in the hour when illness and pain fasten on him. I have remarked that butchers, who are seldom accused of over great softness of heart, do not bear pain and accident well: nay, I have seen a colossal butcher collapse at a cut of the finger that seemed a mere trifle not worth a second thought. He who feels for others often has the strongest and tenderest heart, and perhaps no nobler character can be conceived than the resolute, large-hearted, sympathetic man, who, while able to endure with the fortitude of a Red Indian pain inflicted on himself, lives to do good, to soothe and cheer those less determined than himself, and who knows no grander vocation than the relief of every form of suffering.

SCOTTISH NOTES.

GLASGOW.

THE medical societies have resumed their meetings. At the opening meeting of the Clinical and Pathological Society, Professor Gairdner on being re-elected to the presidency after an interval of fifteen years, reviewed the progress of the society during that time, and suggested that during the current session special attention should be devoted to diseases of the skin. He also suggested that much good might be done by the study of old cases, and the observation of the healing process and final results of healing in these diseases.

At the opening meeting of the Medico-Chirurgical Society on October 5th a very interesting paper was read by Dr. J. Francis Sutherland, "On the Breakdown of the Hospital System." The points drawn attention to by the speaker were, firstly, the inadequacy of hospital accommodation to the needs of the public, and the altogether irregular disposal of such as exists, in reference to density and social conditions of the surrounding population; secondly, the unsatisfactory, and, indeed, the precarious condition of our large hospitals in respect of financial conditions, the large London hospitals affording many striking examples of this; thirdly, the perversion of hospital benefits by the unnatural selection of subscribers' lines; fourthly, the unnecessary expenditure in management, and the crossing of purposes involved by the upkeep of many small hospitals; fifthly, the want of more convalescent homes and sanatoria in connection with most large hospitals; this with a view both to putting the outgoing patients in more favourable circumstances during convalescence from acute illness, and by shortening the stay in hospital of patients, to increase the number of those who can benefit by its care.

All this, it was maintained, speaks to a state of affairs

which, in the interests of the community at large, the State cannot afford to disregard. It was suggested that the whole matter be made subject of enquiry by a Royal Commission, the Commissioners to consider the whole question of hospital distribution; the desirability of aiding voluntary effort by Parliamentary grants; the establishment of an administrative bureau in every hospital town composed of urban and rural representatives *from among the subscribers*, from public bodies and crown representatives, which should settle what the hospital accommodation of a district should be, and in connection with which there should be a staff such as that of the Charity Organisation Society, whose duty it would be to inquire into the domestic circumstances, etc., of those who after medical examination have been found suitable subjects for hospital treatment. Hospitals thus reconstituted should have no connection with workhouses or poorhouses.

Reviews.

Partial Syllabic Lists of the Clinical Morphologies of the Blood, Sputum, etc., etc. By EPHRAIM CUTTER, M.D., Harvard, etc. New York. 1888.

THE introduction contains the following paragraph:—"Those who gain a tolerable knowledge of these lists will expect, among other things, to diagnosticate consumption of the lungs in (1) the pre-tubercular state; (2) in the invasion stage; (3) in the breaking down stage. To diagnosticate syphilis at once. To diagnosticate rheumatism in its various forms. To diagnosticate fibræmia, anæmia, leucocythæmia, malaria, diseases of fatty degeneration, sclerosis, locomotor ataxy, impending apoplexy, and paraplegia, etc., etc. To diagnosticate a state of perfect health, a tendency to diseased conditions, etc." Under the heading of morphology of the blood in consumption, we find this remarkable statement:—"The sticky white corpuscles, the massive fibrin filaments in skeins, and the yeast spores alone or combined, form aggregations, masses, collects, thrombi and emboli which block up the blood-vessels of the lungs soonest, because exposed to cold air, the most of any viscus; *the blood-vessels contract, and thus arrest the thrombi and form a heterologous deposit, which is called tubercle.*" Rheumatism is called the gravel of the blood, and the pre-embolic state described in the following sentences:—"As thrombi precedes emboli, so they can be detected in the blood before the embolism, simply by the morphology of the blood. In this way, sudden deaths from embolism, especially in the puerperal state, can be averted, and this aid alone renders the microscope an invaluable assistant to the physician who is devoted to his profession, and is sufficient to redeem it from the title of 'accursed' as given it lately by a divine of this city." We can pardon the divine if some of his own ailments had been submitted to the author's supernatural powers, inasmuch as he says "The great value of a diagnosis of the morphology of syphilitic blood lies in the almost instant detection of the disease, without a word to the patient." We have quoted enough to show that our author thinks he has marvellous and unparalleled powers of diagnosis, far in advance of the actual state of knowledge at the present day. His exhibition of some of the products from rheumatic blood, at the Washington Congress, did not convince all his audience as to the accuracy and reliability of his powers of observation. R. S. S.

The Abortive Treatment of Specific Febrile Diseases by the Biniodide of Mercury. By C. R. ILLINGWORTH, M.D. (Ed.), M.R.C.S. London: H. K. Lewis. 1888.

THE author lays down the rule that "In all diseases due to the lodgment, growth, and development of specific germs in any part of the body, there is, sooner or later, a manifestation of their deleterious effect upon the economy, in the shape of well-marked spanæmia. The indications in treatment are germicidal and hæmatinic. The biniodide of mercury will be found to answer every purpose in the former, whilst iron has stood the test of time in the latter capacity." He gives the biniodide in doses of $\frac{1}{16}$, $\frac{1}{8}$, or $\frac{1}{4}$ -grain three times a day, and has no doubt as to the efficacy of the treatment in small-pox, typhus, plague, relapsing fever, dengue, yellow fever, hydrophobia, glanders, and leprosy, because he has successfully treated in this way scarlet fever, diphtheria, measles, typhoid, chicken pox, whooping cough, mumps, pyæmia, puerperal fever, and syphilis. Such a universal specific as this should at once produce a decided improvement in the Registrar-General's returns. We cannot but think our author has over-estimated the germicide value of even so active an antiseptic as the biniodide of mercury, but we fail to see why he should have excluded another bacillary disease, phthisis, from the beneficent effects of his omnipotent germ-slayer. The following paragraph will astonish some of our readers:—"The centre of the tongue corresponds to the mesenteric attachment of the intestine, and the edges to the opposite surface. Now, as Peyer's patches are attached along that portion of the lumen of the intestine which is opposite to the mesenteric attachment, the symptom of moisture of the edges of the tongue indicates the 'liquefying' action of developed germs upon the tissues and blood in their immediate vicinity," etc. We fail to find in the book any facts which in the least degree verify the statements made, and must look for further evidence from unbiassed observers before we can accept as established facts the marvellous results arising from small doses of the mercurial biniodide.

R. S. S.

Lupus Vulgaris; or, "The Wolf." By BALMANNO SQUIRE, M.B. Lond. London: Churchill. 1888.

THIS disease, and one resembling it, commonly called the bat's wing disease, have both been well described by our author, who points out the differences between them as follows:—"The normal map of vespertilio occupies the upper half of the nose and the upper part of the front of the cheeks, that of lupus occupies the lower half of the nose and the lower part of the cheeks; vespertilio commences almost always in adult life, lupus commences almost always in childhood; vespertilio hardens and toughens the affected skin, lupus softens it and also renders it much more friable; vespertilio never produces ulceration of the skin, lupus often produces ulceration; vespertilio never leads to destruction of the cartilages of the nose or eyelids, lupus when it invades the nose or lids, often, nay generally, destroys the cartilages, with eventually total loss of the lower part of the nose, or total loss of the eyelids, hence the name lupus." We are pleased to find a protest against the term syphilitic lupus, which is inapplicable and should be discarded. As regards the connection of lupus with tubercle, the evidence appears to be conflicting; the finding of giant cells and of tubercle bacilli in lupus nodules ought to decide the question, but all

observers do not agree as to the presence of bacilli, or as to the results of inoculation of lupus tissue. The fact that bacilli cannot always be found is no evidence that the disease has not been of bacillary origin, inasmuch as it is often difficult to find the bacilli even in masses of pulmonary tubercle. That lupus is a form of localised tuberculosis there can now be little doubt, and all the arguments used in opposition to this view apply with equal force to many other forms of localised tuberculosis, commonly called scrofulous. It is not contagious, it is not hereditary, it constantly fails to give rise to general tuberculosis, its choice of individuals is a matter of the merest caprice, it affects the same percentage of the rich as of the poor, it is not more common in one country than another. Are not all these facts consistent with the idea that it is a local inoculated disease occurring in individuals with considerable resisting power, who do not readily become a prey to the graver forms of tuberculosis. The more satisfactory methods of treatment appear to be those which aim at complete destruction of the affected tissue as in other forms of localised tuberculosis.

R. S. S.

The Art of Dispensing; a Treatise on the Methods and Processes Involved in Compounding Medical Prescriptions.

London: Office of the Chemist and Druggist.

THIS work must be welcomed by the student who really wants to learn his profession. Dispensing is an art, though unfortunately of late years there has been a tendency to deny this. Prescription writing has gone out of fashion, and dispensing has not been so much practised. Ready-made prescriptions account for this. Rule of thumb dispensing is no doubt easily learnt, and any office boy of average intelligence can pour a certain number of drops into a vessel and fill it up with water, but this is a very different kind of thing from the dispensing treated of in this volume. Apprentices who will take the trouble to read this work, will form a higher conception of their calling; and if they master all the details so clearly explained, they will be qualified for what is so truly described as the most responsible part of the pharmacist's duties. We do not know of any other work in our language which deals of the subject, save the 1885 edition of this book and the present one. Some of the most eminent British pharmacists contributed to the 1885 treatise. The main features of the 1885 work have been retained in the present treatise, with the more important contributions of the writers, but many new features have been introduced. The work as a whole has been re-written. The Table of Contents ranges over everything that can come within the work of the dispenser. In the general suggestions we have hints on style, and precautions, and a number of aphorisms which should be engraved on the apprentice's memory. We have next an explanation of weights and measures, of the metric system, and then prescribers and dispensers come under consideration. Here we have a number of ethical points considered, relating to errors in prescriptions, extra doses, repeating of prescriptions, etc., special drugs and special conveniences for dispensing, pills and their excipients; the making of the various forms in which medicines are presented, as mixtures, lotions, liniments, ointments, powders, emulsions, plasters, are treated with the utmost *minutia*, extending from page 31 to page 191. Incompatibles are introduced in the following remark, which is, we believe,

perfectly true:—"Medical men are but rarely good chemists, for this would necessitate longer devotion to chemistry than the average medical student can afford." Hence the importance of this branch being taken up by the dispenser in order that he may *check* the prescriber's combinations. The dispensing of incompatibles prescribed by a physician may necessitate some consideration on the part of the dispenser. Sometimes the prescriber intends his prescription to be dispensed as written, but very frequently incompatibles are ordered through lack of medical knowledge; and not only incompatibles, but explosive and inflammable compounds are prescribed. The dispenser forewarned is forearmed. There ought not to be illegible prescriptions, but from the specimens given in this work it is evident that they are frequently met with, in fact it is proverbial that pharmacists are able to decipher almost any kind of writing; it is made a test of examination at the Pharmaceutical Society, as badly written medical prescriptions have to be deciphered by the candidates. The names of some of the bad writers are given, and certainly they should be held up as awful examples. Foreign prescriptions also present a difficulty in the way of writing, as well as in dosage and medical nomenclature. The difficulties are here explained away, and in the appendix are to be found the terms likely to occur in French and German prescriptions. Teachers of pharmacy will find this an invaluable text-book, and students for examination purposes could not have a better guide. The authors have the power of putting their ideas clearly and concisely. The book might have been swelled to a voluminous extent by the use of padding, of which there is not a single line.

Short Notices.

Therapeutics ought to become a Science. By WILLIAM SHARP, M.D., F.R.S. London: 1888.

SCIENTIFIC medicine is, of necessity, founded on a basis of physiology, pathology, and therapeutics. The super-structure cannot be stable if the foundations are not firm, but we scarcely think that the adoption of the term antipraxy will do much either to improve the scientific foundation of therapeutics, or the super-structure of medicine.

R. S. S.

Report of the Sanitary Condition of the Borough of Birkenhead, for the year 1887. By FRANCIS VACHER, Medical Officer of Health.

THIS carefully drawn up report scarcely needs comment, and does not need criticism. The Birkenhead Town Council may be congratulated on the vigorous and thorough manner in which the sanitary work of the borough and the report thereon have been executed.

Traité de Pathologie Chirurgicale Speciale. By Dr. KENIG.

DR. TERRILLON has undertaken to introduce this work to French readers. He states that it is not a critical but an eminently practical work. A perusal of the work will

at once show that the author is not only an accomplished surgeon, but that he is also a skilful and judicious practitioner. The first part which has just appeared relates to the diseases of the brain, of the cranium, and of the face; the eye and the ear have been advisedly omitted. According to the plan of the author, the work seems to be intended rather for practitioners than for students. The practical side of each question is treated very minutely, but the theoretical side is less dwelt upon. We gather above all from this first fasciculus that the chapters relating to cerebral injuries have been studied with the greatest care. Physicians and surgeons will equally derive profit from the pages in which the author deals with the diagnosis, prognosis, and treatment of surgical injuries of the skull and encephalon. We notice with pleasure that the names of French authors are often quoted!

H. H.

Leçons Cliniques sur les Ténias de l'Homme. By Dr. BERENGER FÉRAUD.

THIS important monograph is the most complete work which exists on the subject. The author has collected from a naturalist point of view all that has been written on the subject. The work is enriched by numerous engravings and will be necessary alike to the physician and the naturalist. In Europe there is a tendency to the substitution of the armed for the unarmed tænia, partly a result of the expeditions to China and Syria, and partly through the importation of live-stock from Egypt and other parts of Africa. Dr. Féraud has been ably assisted by his pupils, to study tænia in the five large hospitals attached to the maritime arsenals of France, and has been able to prepare from symptomatology and treatment illustrative diagrams. Amongst therapeutic agents he gives the first place to tannate of pelletierene.

H. H.

A Handbook of the Theory and Practice of Medicine. By FREDERIC T. ROBERTS, M.D., etc. London: H. K. Lewis, 136, Gower-street.

THIS is the seventh edition. The work has thus passed beyond the stage requiring a long or exhaustive review. The profession and the students have pronounced a convincing opinion on its value by exhausting each edition of the work as it appears. It is about fifteen years since Dr. Roberts first published his excellent manual, and every two years since a new edition has been required. The present volume contains over a thousand pages, and is complete in every part. In order to bring the book up to the latest stage of medical knowledge, Dr. Roberts has had to re-write and condense part of his work, and this he has done without sacrificing anything of value, whilst he has been thus able, without increasing too much the size of the book, to bring in the latest additions to pathology, treatment, etc. The work is admirably suited to the needs of the student, but it is none the less fitted for the busy practitioner, who will find it a useful work for reference.

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UPON the general practitioners of Great Britain there rests a great responsibility. They attend, we venture to say, the majority of the confinements, and that they feel the responsibility may be taken for granted, for apart altogether from any scientific or humanitarian feeling they may have in the recovery of their patients, they are under the influence of another power. The practitioner who has a high mortality in his midwifery practice will very soon be without any confinement practice at all. It therefore behoves those who are in charge of this important branch of practice to take heed that they do not add to the general mortality of the country, and to consider whether they are practising midwifery under scientific conditions. Most of us have found it true that child-birth is a simple physiological process, painful certainly, but with very few rare exceptions, natural and safe. We have all known that deaths occurred after confinements from a variety of causes, as gonorrhœa, syphilis, pneumonia, scarlatina, heart disease; that death occurred especially in the lower strata of society, the victims of drink, destitution, syphilis; in the women who live in the crowded courts and alleys of our great cities, and that it found the victims of seduction an easy prey. This is very old teaching. The introductory address from Dr. CULLINGWORTH at St. Thomas's Hospital dealing with this subject, though given to the students, was addressed to the medical profession, and we cannot allow it to pass without some comment. We thoroughly sympathise with the aim of the lecturer to limit puerperal fever, as being the aim of physicians ever since midwifery became part of medicine. The literature on the subject is vast; but though vast, we do not yet know what puerperal fever is. It is interpreted variably, and under the heading of puerperal fever are included a number of conditions which have no connection with one another, save that the patient has died after confinement. Taking puerperal fever in the very broadest sense, Dr. CULLINGWORTH endeavours to show by statistics that puerperal fever has been reduced by the use of antiseptics; that routine irrigation with a syringe is capable of removing and preventing a disease which frequently arises in parts which the syringe or lotion can never reach, and a disease of the very nature of which we are in ignorance. The proof of this he gives in the form of statistics. He shows clearly that certain hospitals have reduced their mortality, in one case from 11 to 4 per 1,000 at Vienna; in another from 50 per 1,000 to 10; in another from 60 to 2.1; in another from 93 to 11 (Paris); in another from 30 to 6. These figures are simply appalling; they reveal a state of midwifery practice in the periods when the high death-rate occurred which reflects disgrace upon all connected with the management. We can imagine the conditions of insanitation which must have existed during the periods of high mortality. Thanks, no doubt, to the introduction of antisepticism,

lying-in-hospitals began to look about, and to set their houses in order. Hygienic arrangements were improved, and attention was paid to the environment of the patient, and the surgeon and nurse became cleaner in their habits, and thereon followed a considerable lowering of the mortality. We fear that Dr. CULLINGWORTH has confounded the one with the other, attributing to the use of some simple wash what has really been brought about by a number of forces, all acting together to a common end. In the improvement of maternities which have had a 60 per 1,000 mortality from puerperal fever, are combined the skill of the physician, improved ventilation, healing, improved bedding and ablutatory properties, improved nursing, and—standing out clear above all—cleanliness, that great English virtue said to be next to godliness, but certainly neglected by the physicians and surgeons of nations which claim to give us a lead in the matter of science. Dr. CULLINGWORTH has had to go far abroad for his statistics, which unmistakably prove his point—viz., that puerperal fever can be reduced. We give some statistics which have no connection in any way with antisepticism, though they have a great deal to do with cleanliness, which unmistakably prove that what the foreign hospitals needed was the system of management which already existed in our English workhouses. The patients admitted into our workhouse maternities come not only from the lowest strata, but from a strata particularly unfavourable to the process involved in labour, so that if we obtain amongst this class a mortality of even 1 per cent. during the years antecedent to general antiseptic precautions, we establish a *prima facie* case that antiseptics are not alone the cause of the lowering of puerperal mortality. The Local Government Board obtained returns from 1871 to 1880 of the births and deaths in the whole of the workhouses under the authority of the Local Government Board. In 373 of the provincial workhouses, and five of those of the metropolis, representing 25,198 accouchments, there was not a single death in the decade. In 136 others, two of which were in the metropolis, there was one death in each, to 11,310 deliveries in all.

Here we have figures far superior to some of those quoted by Dr. CULLINGWORTH with a mortality almost *nil*. This represents the very best side of the case. The information collected embraced 87,726 deliveries—23,117 in the metropolis, and 24,609 in the provinces; 23,820 were *primiparæ*, and 66,095 were unmarried. The general death rate averaged 1 in 113 in London, and 1 in 115 in the provinces. Had the conditions which applied to the 25,198 accouchments been in existence in all the other workhouses, the mortality would have been, of course, *nil*. If we compare the general mortality in the country we shall be able to see how far we have progressed in England. In the forty-second report of the Registrar-General of England, table 44, p. 23, is an abstract of the deaths in England, referred to child-birth, in each of the three years from 1847 to 1879. There were in all 23,953,400 children born alive, and 116,648 deaths from metria and child-birth, in the

proportion of 0.5 per cent. From metria alone the recorded deaths were 42,647, or in the ratio of 0.2 per cent. The whole mortality combined during the lengthy period in question was 4.9 per thousand. These figures are taken from Dr. MOUAT's paper contributed to the International Medical Congress, London, 1881 (*Trans.*, vol. iv., p. 392). If we compare these figures with those of the Imperial Hospital, Vienna, or those of the General Lying-in Hospital, London, we shall see that there is a gain of 2 per 1,000, and they are still more striking when compared with the Paris mortality, which amounts to 11 per 1,000, in spite of the most elaborate antiseptic precautions. Dr. CULLINGWORTH has attempted to prove too much, and, moreover, he has made statements which are hardly warranted by our present state of knowledge. 1. He says: "There is now abundant evidence to show that the disease is always due to the introduction of pathogenic micro-organisms from without." This is absolutely misleading, and not based on scientific evidence, and, moreover, is negated by the fact that we have puerperal fever produced by the bursting of a fallopian tube internally, so that however careful the obstetrician was, or however antiseptic he was, he could not prevent this. 2. Again, the remedy is far from being acknowledged effective, though it is very simple. What is required, he says, is "that no micro-organisms should be allowed entrance to the genital tract either during or immediately after the process of parturition." The only way to do this would be to absolutely seal up the vagina. It cannot be done by the routine use of 1 in 1,000 solution of corrosive sublimate. Repeated experiments have been tried by chemists to test the death-killing power of various agents recommended as antiseptics, and we know, though we have many deodorants, we have but few agents which will destroy disease germs, and when they do they must be used in much stronger form than 1 in 1,000. Corrosive sublimate in proportion to 1 in 1,000 is powerless to kill spores. Moreover, supposing a nurse or doctor uses the injection once or twice a day, there is no guarantee that the patient will escape infection. We would not for an instant underrate the importance of the subject which Dr. CULLINGWORTH has taken up, but when writers go beyond the facts even in the sake of a good cause, they should not be allowed to pass without challenge. In America there is one practitioner who insists that after each confinement the womb should be cleaned out by the hand, and the internal surface carefully examined. In some other countries there are those who introduce into the cavity medicated pencils and washes, and they are all doing so under the craze, that labour is not a natural physiological process, and that it can only be completed by force, especially by manual assistance both before and after. In America they call one form of practice Sioux Indian style. The method recommended by Dr. CULLINGWORTH does not offer this reproach. It is simplicity itself, and armed with a syringe and a 1 in 1,000 solution of corrosive sublimate, the practitioner cannot do so much harm, though he may not be able to slay the hydra-headed monster—puerperal fever. The

syringe has been immortalized by STERNE. The syringe in modern times—put to another use in the same region—is to be a potent magician, a wand of magical power. The poor want more light, better dwellings, more ventilation, cleaner surroundings; they want before and after confinement better food and better nursing. The worn-out, prematurely-aged mothers who are crowded together in the East end of London, in Glasgow, in Manchester and Liverpool have to undergo the pains of maternity and its dangers amidst conditions which make us even shudder. The wonder is not that so many die, but that so many live through it—without care, without help, often without proper food. Puerperal mortality is to be reduced to a minimum by the syringe! Well, there are always infallible curers and makers of platitudes. We fear that we want something more. To reduce puerperal mortality we shall have to make a large call on the philanthropic, and a crusade of a very different kind will have to be made.

BLACK-MAIL is the name of a new piece which we believe will be shortly produced at one of the London theatres; it is said to be from the pen of Mr. DABBS, Surgeon, Shanklin. We do not know the exact plot, but it suggests to our mind a subject from which medical men of late years have frequently suffered—viz., grave accusations made with the object of extorting money, accusations which bring down to ruin the unfortunate object of them. There is infinite scope for the dramatist's skill in portraying a plot of this kind. On the stage the conflict of human passion, feeling, and intrigue, is always sure to interest an audience, but on the stage of life the victim of black-mail is not an object of amusement, for in the interest lies the clearing of his character, and for him life becomes a very serious matter indeed, and, as we but too well know, the drama in which he takes a part too frequently ends in tragedy. There are men who are not capable of standing the ordeal of a trial, even though innocent, and have sought relief in death. They saw before them only ruin; for no matter how they might come out of their trial—though they might leave the court without a stain on their character—yet financial embarrassment would follow. Death before dishonour is a tenet with many men. Black-mail is becoming but too common. The profession, a few years back, fully alive to the existence of this practice, took up the subject of medical defence, and several attempts were made to start a medical defence union, so as to bring to the aid of the individual the combined force of the medical profession, and to protect the weak and the innocent. But these attempts have not succeeded. The time is again ripe for pressing the subject on the attention of the profession, which has the fullest sympathy with the latest victims of unjust charges, but which, at present, cannot render them assistance except in individual form. In some recent cases, had a medical defence association existed, we feel assured that much mental suffering would have been spared those unjustly accused, because the evidence would have been sifted before trial, and when

it was announced that the Medical Defence Association was prepared to take up the cause on the part of the accused, the cases would have broken down. A Medical Defence Union is not for the purpose of protecting the guilty, but for that of shielding the innocent. Judging by some of the recent charges, it would almost appear that any of us are at the mercy of any designing woman, and no matter how carefully we may observe our relations to our patients, there would seem to be no escape. Upon the individual comes the crushing blow, but he is unable to withstand it. If we had a society the individual would feel that he had some chance of redress, and that he could lay his case before a tribunal of his professional brethren, and that the battle would then be fought in his interest without pecuniary ruin. We believe that Mr. LAWSON TAIT could tell us of the good done in Birmingham alone in strangling false charges at once, this being done by means of a Medical Defence Union. The society which he has been the means of pulling out of the hands of professional touters should have its work more widely known, and have a larger accession of members. It is conducted on the mutual principle, with a limitation as to any calls to be made. The larger the number of members the better will be the funds.

At the present time, when the more complete organisation of the volunteer army for the purposes of home defence is occupying popular attention, it is satisfactory to hear that a War Office committee is sitting to consider the medical requirements of the force. The very existence of the volunteer force assumes the possibility of invasion, and its partial maintenance by State grants is only justified by the belief that in case of national emergency the force would be thoroughly able to co-operate with the regular troops in garrison or in the field. The more complete our preparations, the less risk of ambitious rivals, in case of serious complications in European politics, seeking to crush the power of England by carrying war into our own country. Combatant officers, who have never experienced the actualities of warfare, sometimes speak as though all that is necessary is that their regiments should be composed of well-armed men with pluck enough to face the enemy. Their imagination takes them as far as the repulse of their opposers, and there leaves them. The questions as to who is to provide food for the wearied men after the fight, and who will look after those who have fallen, seem hitherto to have received less than their due consideration. It is gratifying to note that the present committee on Volunteer Medical Organisation has been appointed chiefly on the suggestion of the volunteer medical officers themselves. The difficulties to be solved are numerous, and it is too much to expect that the deliberations of this committee will at once produce a completely satisfactory solution on all points. At present it can hardly be said that the volunteer force has any medical organisation. Individual regiments are well provided with medical officers, and regimental bearers are trained in most corps; but, with

the exception of a wholly inadequate number of bearer companies of the Volunteer Medical Staff Corps, no provision for the care of the sick exists behind the fighting line. With a purely regimental system of medical aid, an army is hampered in its movements, as regiments must then take their sick along with them or desert them to their fate; and rapidity of movement often decides the success of an army. With a force consisting of corps which are drilled separately and independently, a regimental system of medical aid is indispensable; but arrangements must be made by which hospitals can be established in rear of the force if ever it should take the field as a united army. Under existing regulations each corps has one surgeon and one or more acting-surgeons, the appointment of these latter ceasing at once if the regiment should be mobilised for service. These acting-surgeons, being partially trained in military duties, are too valuable to be lost to the service when war is imminent, and should be utilised for hospital duties if they are taken from their regiments. But in order that medical officers could be posted where most required, it is advisable that all—whether serving with regiments or with the staff corps—should be banded together as a volunteer medical staff under an administrative chief. If this were done, and advantage taken of the latest phase in volunteer organisation to elaborate a system of control by brigades, it would go far to ensure the medical efficiency of the whole force. A bearer company of the Volunteer Medical Staff Corps should be raised for each of the thirty brigades into which the force is now consolidated; and if every brigade had its own regimental aid, bearer company, and arrangements for manning field hospitals, the whole volunteer army would be well provided for. Any medical organisation for the volunteers must thus aim at providing a medical department without interfering with the existing regimental system; and whilst retaining for medical officers the social advantages of serving with regiments during peace, make provision for the departmental duties in hospitals, etc., in case of emergency. By such a scheme, individual officers would lose nothing of their existing advantages, and the service would gain in efficiency.

The question of the Army Medical Reserve of Officers is also one of great importance. The Royal warrant constituting this reserve has been severely criticised, and is not entirely free from objection. That some medical reserve is needed, in case the army were increased by the calling out of the reserves, will probably be conceded by all. The regular medical staff at its present strength is quite insufficient to meet the requirements of a largely augmented force, and no responsible administrator would seriously attempt to "cripple or supplant" a department so essential to the efficiency of the army. The principle of the reserve is rather to *strengthen and supplement* the regular medical service of the army by associating with it the volunteer medical service. A sufficient number of army medical officers must always be kept in the country to leaven the whole. And indeed it is difficult to imagine how any reserve of medical officers could enable

the authorities to keep the whole of the regular medical staff on foreign stations, even if they so desired. The system of medical aid in the army has to provide for more than the mere treatment of the sick. Commanding officers must be able to trace men who leave their regiments ill; and returns have to be furnished with this and other objects. Wherever, therefore, reserve medical officers, unfamiliar with the routine of the service, are posted, regular medical officers must be there also to ensure the efficient working of the system. Although the Army Medical Reserve of Officers will necessarily come under discussion in the committee now sitting at the War Office, it is by no means the primary object for which the committee was appointed. It will only come up for consideration as a detail in the wider subject of volunteer medical organisation. It is to be hoped that the question of providing medical stores and equipment, not only for training purposes, but for immediate use on an emergency, will not escape the attention of the committee. The brigade bearer companies of the Volunteer Medical Staff Corps might in most cases be able to improvise transport with carts and wagons from the district in which the corps constituting the brigade are raised; but field companions, medical panniers, etc., must be supplied by the authorities, and should be kept at the head-quarters of the district, under charge of the principal medical officer, for issue when required. We hope that whatever suggestions may be made by the committee as the result of its deliberations will be acted upon without delay; and we feel sure that volunteer medical officers all over the country will cheerfully co-operate to make the volunteer medical service a reality. The composition of the committee now sitting at the War Office—representing as it does the combatant and the medical branches of both the regular and volunteer services—is a guarantee that the medical organisation of the volunteer force will receive at its hands all the consideration that so important a subject demands.

In the paper published by Dr. STEAVENSON "On the General Uses and Action of Electricity," a full description was given of the method adopted by Dr. NEWMAN for the treatment of stricture by electrolysis. The evidence in favour of his method appeared very strong, but now we have to hear the other side, and for this purpose we give an abstract of a paper by Dr. E. L. KEYES, of New York, in which we find the following conclusion:—Dr. KEYES says, "Electrolysis with a very mild current—I prefer to put it at less than two milliamperes—does no harm; in fact, does nothing that I can appreciate, and does not interfere with the benefit to be derived from ordinary dilatation. I believe that a strong current is full of danger, both immediately from irritating effect, and ultimately from cicatricial effect, and that employment of the negative pole does not prevent this. My study of the subject, and the experience it has brought me, digested with all the impartiality I possess, lead me to state, that the allegation that electricity,

however employed, is able to remove organic stricture radically, lacks the requirement of demonstration. The confidence of its advocates that it will radically cure organic stricture is, in my opinion, due either to the combined credulity of the patient, and imagination of the surgeon, or to some special but fortuitous act of Providence, upon the co-operation of which, in the case of his own patients, the general practitioner cannot with any confidence rely." This is a very plain and straightforward statement, and rests upon the following evidence. Dr. E. L. KEYES was determined to investigate the evidence on which rested a belief in the possibility of curing stricture. He says: "I turned to Dr. NEWMAN, of New York, who is 'the apostle of this creed,' and who alleges that he has radically cured 200 cases or thereabouts of stricture by its use, and asked him for instruction and his co-operation in my investigation of the subject, which I assured him was honest, stating that if my results justified his assertions, I would advocate the method and advise its use generally. Dr. NEWMAN kindly accepted the proposition, sent me his pamphlets, and assured me that following his rules would convince me of their truth, and accepted from me a dispensary patient to treat, that I might personally verify the result obtained by himself. I therefore procured from various dispensaries seven pronounced typical cases of urethral stricture; three of these I treated personally, with all the ability I possessed, commencing in January, 1888, following Dr. NEWMAN's rules as closely as I was able. Three patients I turned over to my assistant, Dr. E. FULLER, who treated them independently, fortified with extra knowledge gained by personal observation of Dr. NEWMAN's operative method as practised by himself (one case of urethral spasm was also treated by Dr. FULLER). The seventh case was sent to Dr. NEWMAN, who received the patient kindly, and treated him about once a week from February 6th until June 27th—nearly five months. My assistant, Dr. FULLER (once Dr. GARRISON), always accompanied this patient on his visits to Dr. NEWMAN, and immediately upon leaving him wrote down in a case-book what had happened during the interview. One other case previously treated came to me, and out of this material I propose to construct my report."

Dr. KEYES followed out Dr. NEWMAN's directions as faithfully as he possibly could, purchasing his instruments. He writes with regret that even Dr. NEWMAN's own case did not progress under the treatment.

"As for my own several test cases, I may summarise them by saying that in no instance did any more benefit appear from the electricity than could have been obtained by ordinary dilatation; that most positive failure of cure must be reported for all; that pain, local inflammation, putting the patient to bed, and threatened perineal abscess must be noted as among the complications of treatment; that relapse as to recontraction of the stricture was found in all the cases tested, after a moderate interval, being most marked, however, in the case of the patient treated by Dr. NEWMAN for me. For his sake I regret this fact, since he

was most kindly in his efforts to help my study, and I regret that his patient at least did not have a better fate."

Dr. KEYES' evidence is supported by Dr. F. FILDEN BROWNE, who writes as follows in the *Journal of Cutaneous and Genito-Urinary Diseases*:

"The only advantages this method can claim are: 1. That it encourages patience and gentleness. 2. That it furnishes two aids in overcoming spasmodic strictures: (a) lubrication; (b) an anæsthetising influence upon the terminal nerves at the irritable point, and possibly earlier relaxation of spasm by muscular exhaustion following overstimulation; or, if the current is strong and long-continued, it may, as the electrode slowly passes, effect a moulding of the muscular envelope of the stricture, destroying its contractile elasticity and sealing this distention until again revived by natural processes. 3. A slightly increased rate of exfoliation of hypertrophied epithelial masses. 4. On theoretical grounds I would try it in cases of deep stricture of doubtful nature with urethral fistulæ. 5. In certain cases, as a more or less permanent aid in those symptomatic affections, often of obscure origin, frequent and painful micturition."

We expect that Dr. NEWMAN will reply to the strictures of Dr. KEYES and Dr. FILDEN BROWNE. The question is one of very great practical importance. It should not be difficult to decide the question between Dr. NEWMAN and Dr. KEYES as to the value of the method, though there is always a difficulty in appraising the value of stricture treatment—as to wit, internal urethrotomy—some regarding it as a simple and safe operation; others as a most dangerous one.

Annotations.

"Forsan et hæc olim meminisse juvabit."

OURSELVES.

In order to make the *Provincial Medical Journal* more popular, the publishers have decided on increasing the pictorial part of it, not in the way of likenesses, but in illustrations of grave and rare cases of disease. The illustrations which have already appeared in the *Provincial Medical Journal* have been pronounced by *connoisseurs* as being in the highest style of art, and we intend, in the reproduction of drawings, to keep up to the same standard. We have felt a difficulty in using the material sent to us, and we have been obliged to hold over many useful papers. In order to obviate this, the *Journal* will be increased from forty-eight to sixty-four pages of reading matter from the 1st January, 1889. This will be done to benefit our subscribers, and, at the same time, in the hope of receiving an increased measure of support from the profession. We aim at making the *Provincial Medical Journal* worthy of the provinces. We have striven as far as possible to carry out Thackeray's idea, of a magazine as a journal "written by gentlemen for gentlemen." We may here reply to some correspondents.

It is well known to editors that many readers think they could edit a paper better than the editor. Editors can appreciate suggestions, and can understand this feeling. Some would like us to give more local news. This we strive to gratify; but the local news must be of a nature to be interesting to the profession generally. We cannot make the *Journal* a chronicle of "small beer." We cannot, moreover, make it the medium of gratifying private malevolence or jealousy. There is too frequently much jealousy between local practitioners. This is regrettable. Hence, we have not inserted letters which appeared to us influenced by this feeling. In many cases we have sent copies of letters, in which complaints were made by one practitioner of another, to the person incriminated. We have received a reply which has satisfied the complainant. We consider that some of the letters published in some of our cotemporaries might be made good cause for libel, and that medical journalists are rather too free in publishing reflections on their brethren, and presume too much on their position. A medical man's character is a very tender thing; it cannot bear being sullied in the slightest degree, and in too many cases this is done. The power of the press is very great; it has a giant's strength, but it should not so frequently put forth its strength. We have refused insertion to slanderous paragraphs and to gossip affecting our brethren's character, even though substantially true. The lay press is but too ready for this class of paragraph. We should rather lean to cloaking over our *confrères'* sins. If A—— becomes insolvent, or runs away with a patient's wife, or commits some *faux pas*, or is accused of some grave charge, the columns of a medical journal are hardly the place for such details. Need we call to mind the parable of the woman taken in adultery, and the words then uttered. We want in medical journalism a little more charity and a little less personality. Where principles are at stake, we have no hesitation in stating our views, and few can accuse us of want of independence, but we have striven always to disassociate the man from the measure we condemned.

MEDICAL PUBLISHING.

THE publishers have received numerous letters on the subject of medical publishing, and they have been asked to undertake the publication of medical books. The following extracts from a recent letter throw light on the reasons why they have been so consulted:—"It has several times struck me that I might write to you on a subject on which I feel very strongly, and in relation to which I think you might confer a real benefit on the medical profession. I mean the publication of books. Those of us who exercise ourselves by medical literature are in the hands of a few publishers. The result is that medical books cannot be got to pay their expenses. . . . Your *Provincial Medical Journal* has been such a success that I really think it would be worth your while to take up the publishing of medical books on reasonable terms, by which authors would have some chance of getting some remuneration." Whole editions of medical

works have been sold, and the authors have not received a single penny for their labours. Sometimes they have been even called on, in addition, to pay a heavy sum. In response to the invitation from some eminent members of the profession, the publishers decided to commence a special department for publishing, and will be glad to enter into negotiations with authors.

THE YORKSHIRE COLLEGE, LEEDS.

THE Yorkshire College, Leeds, was opened on October 1st with an introductory address by Mr. T. P. Teale, F.R.S., F.R.C.S. The school is at present in a most flourishing condition, with nearly 200 students. In the course of his address Mr. Teale said: "There was a part, and that no small one, in the training of a skilful practitioner, which neither curriculum, nor lectures, nor examinations, could secure. That part might be called their self-education; the earnest seeking after every opportunity of seeing, of observing, and of doing; the training of their eye not only to see disease, but to observe its effect upon the countenance, the manner, the character of their patient, and, beyond the patient himself, the effect upon others—patients, children, friends, dependents—so that their minds might grasp the whole situation, and enable them to discharge in the fullest sense their duties as medical advisers; the determination to use every opportunity of watching illness, of discharging small duties about the sick, of training the hands and touch and mind to handle gently, and, when obliged to give pain, to give as little pain as possible. And not the least important to a medical man was tact. That was partly the result of natural qualities, partly the result of training of the observation. Tact implies the power of observing and estimating the effect of their own manner and words upon others, combined with judgment to perceive which was the best thing to do, with the right feeling to enable them to act unselfishly in the interest of another." The Leeds School of Medicine has been brought to its present position by the combined efforts of Mr. Teale, Mr. Wheelhouse, and Dr. Clifford Allbutt. The junior staff includes a number of rising men, as Mayo Robson, McGill, Jacob, Wright, etc., ably maintaining the reputation of this great provincial school.

CLINICAL SOCIETY OF MANCHESTER.

At the annual meeting of this Society, held October 2nd, the following office bearers and committee were elected for the year 1888-89:—President: Leslie Jones, M.D. Vice-Presidents: William Sinclair, M.D.; P. M. Pierce, M.D. Treasurer: C. H. Braddon, M.D. Librarian: A. Wahlutich, M.D. Committee: E. Stanmore Bishop, F.R.C.S.; W. H. Boddy, M.D.; R. Crean, M.D.; A. Hill Griffith, M.D.; A. Hirst, Esq.; James Holmes, Esq., M.D.; C. F. Kitchen, Esq.; H. Lund, M.B., F.R.C.S.; William MacCall, M.D.; E. Rayner, M.D.; W. A. Renshaw, M.D.; T. Smith, M.D.; William Thorburn, M.D., F.R.C.S.; W. Walter, M.D.; J. Westmoreland, Esq. Auditors: S. J. Irwin, Esq.; J. Fergusson, Esq. Secretaries: J. C. Railton, M.D.; S. H. Owen, M.D.

THE CASE OF DR. GLOSTER.

In the whole annals of charges brought against medical men, we cannot find one more unjust than that brought against Dr. Gloster. The evidence, of the flimsiest character, at once crumbles to pieces on investigation; and it is almost a matter of regret, that owing to a technical objection, the evidence for the defence was not able to be given in court. We allude particularly to the evidence of Dr. Macnaughton Jones and Dr. Lombe Atthill. Many may have read the charge who may not be able to read the defence, and who may imagine that because a technical flaw was found in the indictment, Dr. Gloster was acquitted solely on account of the technical objection. This is far from being the case. Dr. Gloster has been the victim of cruel circumstances, and has suffered, as so many other medical men have done, from a most unjust accusation.

MEDICAL ELECTRICITY.

AN effort is now being made to lift medical electricity out of the plane in which it has hitherto moved—viz., that of the quack. Electricity can be of great service in the treatment of disease when judiciously applied, but like other agents, it is a dangerous weapon in the hands of those who do not know or recognise its power. The charlatan has hitherto had almost complete possession of this field, and medical electricity has been discredited by the abuse of the system. To beat the charlatan out of the field, an Institute of Medical Electricity has been established in London, where electrical treatment can be obtained under the direction of qualified medical men, and where the development of the science of electricity may take place. The rules submitted to us appear admirable, and are well calculated to prevent the abuses which have hitherto surrounded the application of this therapeutical agent, and we wish the new venture all success.

THE OLD AND THE NEW.

It is naturally to be expected, that owing to the vast literature of medicine, there should be a repetition of ideas, and a re-discovering of inventions, relating to our art. The same ideas occur in English literature to writers living so far apart that it is impossible that there should be plagiarism. One instance of re-discovering an appliance we have in the vaginal douche now so commonly employed and so useful. The modern douche consists of a tin with a flexible tube, which can be used for antiseptic purposes. Alibert, in his "*Elemens de Therapeutique*," vol. ii., p. 559, edition 1814, describes and figures an elegant appliance for the same purpose and on the same principle. It consists of a stand with a case and flexible tube. In a chapter on uterine medications he says: "*C'est a l'experience a nous faire apprecier ce que peuvent operer, dans plusieurs cas semblables, les injections faites avec les differentes substances anti-septiques telles que le vin et le quinquina, etc.*" Alibert was in advance with his antiseptic irrigation by the uterine douche.

CHILD MURDER.

THIS subject comes up periodically. There are spasmodic attempts made to excite an interest in the suppression of the causes which lead to infanticide. Unfortunately, the deaths which occur through neglect or from greed only excite a passing interest. For the past thirty years the medical press has from time to time endeavoured to stir up popular opinions against the evils of infantile assurance, and we hope that by repeating our attacks upon the system we may induce Parliament to pass some enactment by which this form of insurance may be absolutely prevented, or surrounded with such safeguards that infant life may be better protected. Baby farming is ostensibly a crime, but some recent exposures prove to us that the baby farmer still pursues her nefarious trade. Baby murder is very well described by Mr. Joseph Morley in some tracts upon "Health," 1847—tracts which, by the by, are very much better than some of the pamphlets issued at the present day. Speaking on infants' opiates, he says:—"You have, no doubt, seen a Bible print which figures Herod's murdering of the innocents. Mothers cling in agony around children whose breasts are pierced, and infants struggle in the grasp of brawny soldiers. That was a fearful slaughter; yet it was mercy when compared with the more fearful murdering, the yet more devastating slaughter, among which we daily move. In Herod's time there was one day of slaying; in our time there is not one day of rest. Then death came by the sword, with one short pain, and mothers struggled to preserve their offspring; now children perish with the lingering torments of a poison, and drops of death are dealt out to them by a mother's hand. The sale extends through every corner of our land."

THE SHEFFIELD SCHOOL OF MEDICINE.

THE Sheffield School has made a new departure, and has taken a new lease of life. On September 29th Sir Andrew Clarke delivered an inaugural address, which was really the opening of the new building which has been erected through the enterprise of the profession in Sheffield. Sheffield is a large centre, with admirable clinical resources supplied by the General Infirmary, the Public Hospital, and the Jessop Hospital for Women, giving a total of 346 beds. The new building is a handsome stone erection fitted up to supply the demands of modern medical educational methods.

"THE MEDICAL REGISTER."

WE publish in our advertising columns two important announcements from the General Medical Council. We direct particular attention to these notices. It is highly important that medical practitioners should communicate any change made in their address, as without their help it is impossible for the Registrar to insure the correctness of the "Medical Register," and should any name be ultimately omitted owing to inaccuracies and the consequent return of official communications, it might cause serious inconvenience to the practitioner. This the Registrar would gladly avoid.

VOLUNTEER MEDICAL REGULATIONS.

WE shall continue the Volunteer Medical Regulations, but we have been waiting for some information which will render them more complete; they will be concluded in the December number.

THE DURHAM SCHOOL OF MEDICINE.

THE Durham School of Medicine, which is really at Newcastle-on-Tyne, has been compelled by the increasing requirements of the students to erect new college buildings. A site one acre in extent has been obtained in Bath-road, off Northumberland-street, and here the architects, Messrs. Dunn, Hanson and Dunn, have already erected, in Elizabethian style, two wings of what will be in the future the College. We can recommend this school, and it is especially worthy of the attention of students who desire to take out the degree of M.D.

THE MEDICAL RESERVE.

THE *British Medical Journal* published in its issue of October 16th what is called a *jeu d'esprit*. We give a stanza to illustrate the style of versification of the poetic (?) effusion which was honoured by a place in our cotemporary's columns:

"Ye doctors of our native land,
Who ne'er from duty swerve,
Arise and join the noble band,
The Medical Reserve.
"Come, show your deep devotion
In Britain's extremity;
Give her soldiers pill and potion,
In great emergency."

Mark the rhyme, the exactness of the metre, and the brilliancy of illustration. The poor medical reservists will at once resign, after this poetic attack, and the British Army medical officers will at once raise a monument to the "man in the gap" who has saved them from the destruction threatened by the scheme. The Militia medical officers who have been attending at "contract rates" at station hospitals may soon expect a broadside from the indignant author of these verses. The author evidently thought that ridicule was enough to kill anything. The sublimity of the ridiculous has been reached in this effusion.

New Remedies.

Cocaine.—Some interesting discoveries have been made by Professor Liebermann in connection with this alkaloid, which may throw some light upon the cases of poisoning which have occasionally followed the administration of cocaine. Professor Liebermann has examined about a kilogramme of the amorphous alkaloid obtained from coca leaves, and, apparently in that portion which resists the action of permanganate of potassium, he has found about 70 per cent. of a basic substance which acts as a strong poison. It does not resemble either atropine or cocaine in its action, and is believed to be a heart-poison. To this base he has given the name of isotropyl-cocaine. Benzyl hydride and ecgonine were also found in the crude amorphous alkaloid, mixed with the new base. Isotropyl-cocaine differs from the cocaine and coca-

dine of Hesse in its sparing solubility in light petroleum spirit, and in not affording benzoic acid as a product of its decomposition. It is readily soluble in alcohol, ether, chloroform, and benzol, but cannot be obtained in the crystalline form, and will not yield crystalline salts. The formula given for this amorphous alkaloid is $C_{19}H_{23}NO_4$. It is thought probable that as the permanganate test would not detect its presence, the specimens of so-called pure cocaine which have in some instances caused dangerous symptoms may have contained isatropyl-cocaine.

Borneol.—Experiments as to the comparative therapeutical value of Borneo camphor, Ngai camphor, and borneol prepared artificially from oil of turpentine, have lately been published in the *Journal of Physiology* by Dr. Stockman. The physiological experiments made with these camphors show that the action of borneol, whether in the form of Ngai camphor, Borneo camphor, or artificial borneol, is exactly similar to that of laurel camphor, but that the borneol has the advantage of being less poisonous, at least so far as the heart is concerned. Both borneol, laurel camphor, and menthol are closely related to the alcohol group in their physiological action, menthol approaching the latter most nearly; but as the number of hydrogen atoms diminishes, there is an increased tendency to convulsions of cerebral origin. Borneol is less irritating locally than laurel camphor, and can be given in much larger doses than the latter without causing untoward cerebral symptoms. Both borneol and menthol differ from ordinary alcohol in powerfully dilating the peripheral vessels.

Ethylene chloride.—A curious result has been found to follow the administration of this liquid in the dog. In whatever form it is given it produces a remarkable opacity of the cornea, which does not disappear for several months. This is chiefly due to a swelling of the conjunctival tissue of the cornea, and to a lymphatic infiltration of the cells of vitreous protoplasm.

Para-phenylene-diamine and **Meta-phenylene-diamine** have been examined by MM. Dubois and Vignon from the point of view of their physiological action, and some remarkable facts have been elicited by their research. Paraphenylamine exerts a special action on the eye of the dog; no matter in what part of the body it may be injected, it produces an extraordinary exophthalmia. The eye by degrees come out of its orbit, the conjunctiva becoming pale and œdematous, and forming an enormous swelling almost concealing the cornea. The intra-orbital cellular tissue becomes infiltrated, and the lachrymal glands are blackened by pigmentary deposit. Meta-phenylene-diamine causes all the symptoms of intense influenza. The animal sneezes constantly, and presents all the appearance of acute coryza; a hoarse cough follows, and the ears and nose become hot and inflamed. The animal then becomes extremely depressed and indifferent, and ultimately dies in a comatose state. In the dose of 0.1 gramme both these chemicals cause in the dog salivation, vomiting, diarrhoea, abundant secretion of urine at intervals, and death by coma. These curious attacks suggest the enquiry whether ordinary coryza may not be due to the formation in the human body of some similar body; and further, whether the action of the above-mentioned chemicals, which were doubtless administered to healthy dogs, would be different in the case of disease—e.g., of dogs already suffering from coryza from natural causes.

Myrtus Cheken.—The leaves of this plant, introduced a few years ago into use in medicine in this country as an aromatic astringent and antiseptic, have been submitted to a careful chemical investigation by Herr Weiss. He obtained about one per cent. of volatile oil, and five per cent. of an alcoholic extract. The essential oil had a sp. gr. of 0.8795, and was miscible in all proportions with absolute alcohol, ether, and chloroform. About 75 per cent. of it consisted, apparently, of pinene, and the remainder of cineol and of a body of higher boiling point, which was not further examined. The alcoholic extracts yielded *chekenon*, a crystalline substance, soluble in alcohol, ether, chloroform, benzol, and acetic acid, and insoluble in water; *chekenin*, also a crystalline substance, freely soluble in hot alcohol and ether, but difficultly soluble in cold alcohol, acetic acid, water, petroleum ether, and benzol; *chekenetin*, a yellowish crystalline body allied to quercetin;

and *cheken bitter*, to which the bitter taste of the leaves is attributed. It is amorphous, and soluble in most solvents.

Antipyrin.—It has been pointed out by a Smyrna pharmacist, M. Yaconbian, that the colour test for this chemical is not manifested in an ether and alcohol solution of it until the ether is evaporated. The insoluble green precipitate formed when a few drops of nitric and sulphuric acid are added to a small quantity of the alcoholic solution of antipyrin, and distilled water immediately added, is produced in an alcohol ether solution only under the conditions above mentioned.

Embelia ribes.—In a paper on the chemical examination of the fruits of this plant, what are used as a vermifuge in India, Dr. C. J. H. Warden, of Calcutta, has pointed out that the active principle, named *embelic acid*, discovered some months since, when combined with ammonia, forms an effective anthelmintic for tape-worm, in cases where ordinary tænicides fail. This salt possesses the great advantage that it is tasteless, and that only a small dose is necessary. It is given to children in the dose of three grains, but for adults six grains is found to be sufficient. A dose of castor oil is given previously and subsequently, and the salt is administered in honey and syrup.

Periscope.

I.—GLEANINGS IN MEDICINE.

By W. B. KESTEVEN, M.D.

Precautions against Premature Interment (*L'Union Médicale*, September 13th).—At the sitting of the Academy of Medicine on the 11th inst., M. Bernard (de Saint Germain-en-laye) read an essay on the rules which should be observed to avoid premature interment. He observes that twenty-four hours is too short a period, but that thirty-six or forty-eight hours' delay is more compatible with respect for the dead, and with the prudence which is necessary in order to avoid the burial of the *apparently* dead. On the field of battle, M. Bernard remarks, precipitate inhumations are often unavoidably made; and in hospitals and towns the same care as bestowed in life should be continued until the certain signs of death are evident. The author submits the following conclusions: (1) Cadaveric decomposition is the only certain sign of death; a medical certificate of death should not be given until this appears. (2) Mortuaries should be established, where bodies should be protected, and await these signs. (3) It should be made known that injudicious exposure may convert an apparent into a real death. (4) Interment should take place only upon the production of a medical certificate. [The earliest evidences of decomposition will usually be found on the integuments of the hypogastric regions.—W.B.K.]

Congenital Malformation of the Velum Palati (*L'Union Médicale*, September 4th, 1888).—At a meeting of the Société de Médecine de Bordeaux, Monod described a rare case of congenital adhesion of the *velum palati*, to the posterior wall of the pharynx, with a median aperture opening a communication with the posterior fauces and nares.

Notes from Italian Journals (*L'Union Médicale*, September 4th, 1888).—Dr. Luigi Mazotti mentions the case of a female, aged sixty years, in whom the subcutaneous injections of antipyrine were followed by a papular eruption, which remained five days, and resembled herpes zoster of a marked violet colour.

Dr. Guiseppe Cautani relates the successful termination of a case of abscess in the liver, discharging its contents by the bronchial tubes.

Dr. Brambilla Giovanni records four instances of obstruction of the intestines by concretions, fatal in one case, success attending in three cases by the slow injection of warm water or oil. The concretions were of the size of walnuts.

Dr. Portemski performed suture of the liver for an accidental wound of that organ. The wound was seven centimètres in depth. The suture was made under Listerism precautions, and the case terminated successfully as one of simple laparotomy.

Some Statistics of the Pasteur Institute (*L'Union Médicale*, September 11th, 1888).—The following figures are taken from the *Bulletin Medical*:—During the month of July last 111 persons were treated at the Pasteur Institute. Of this number twenty-six were bitten by animals of which rabies was determined by experiment; seventy-one were bitten by animals in which rabies had been determined by veterinary examination; eleven were bitten by animals

suspected of rabies. Persons who died with rabies in the course of treatment:

1. A female, aged forty-four years, bitten July 1st, several severe wounds. Excisions were practised, and phenic acid applied to some of the wounds; to others, nitrate of silver was applied. This patient died on August 4th. Two guinea pigs inoculated with the brain substance of the dog died rabid. The cerebral matter of the deceased was inoculated into two rabbits, which became rabid in fourteen days.

2. A man, aged twenty-seven years, was bitten by a dog on July 13th. The wounds were washed with phenic acid four hours afterwards. A guinea pig inoculated became rabid on August 3rd. The man died with rabies on August 8th.

3. A workman, aged thirty-seven years, was bitten on May 27th by a cat. The wounds were not cauterised. A portion of the brain substance of the cat was inoculated into a guinea pig; rabies followed in twelve days. The man died from rabies early in July.

4. A man bitten on May 9th died rabid on May 23rd.

5. A miner, aged twenty-eight years, bitten by a cat on June 16th, died on July 3rd.

6. M. L.—, aged forty-four years, was bitten by a cat on March 25th; he was under treatment to April 12th. In the month of July symptoms of rabies appeared, and the patient died on July 30th.

Case of Poisoning by Coffee (*Journal de Médecine de Paris*, September 23rd).—A female, seventy-five years of age, of healthy constitution, who was not in the habit of drinking coffee, took on one occasion ten cups of strong infusion. Two hours afterwards the following phenomena occurred: vomiting, vertigo, noises in the ears, loss of memory, distress, paleness, disordered vision, oppression, general agitation, epigastric pain, coldness of the extremities, and tingling of the fingers. The pulse was increased, but not altered otherwise. Warm drinks and ether were administered internally, with hot affusions, and hypodermic injections of morphia. Sleep was obtained, and the disturbance of the system subsided.

Test for Iodine in Urine (*Journal de Médecine de Paris*, September 23rd, 1888).—To ten cubic centimetres of urine add two c.c. of dilute sulphuric acid (one part to five of water); then add five drops of solution of starch freshly prepared. To this mixture add, drop by drop, a one-per-cent. solution of nitrate of potash, shaking the vessel. If the urine contain iodine the addition of the first few drops will produce a violet or more or less intense blue discoloration, which will disappear on the addition of a drop of ten-per-cent. solution of hyposulphite of soda. The addition to the urine of a few drops of sulphuret of carbon intensifies the reaction.

Fluo-silicate of Sodium—an Antiseptic (*L'Union Médicale*, 30th August, 1888).—Dr. Conrad Berens has published in the *Therapeutic Gazette*, Philadelphia, the results of experiments upon the antiseptic properties of the fluo-silicate of soda as compared with those of the bichloride of mercury, or phenic acid. Solutions of animal or vegetable matter, although treated by the bichloride or by phenic acid, will develop bacteria, whilst the like fluids under the same conditions, treated by a solution of silicate of sodium, remained completely free from those organisms. In illustration of the medicinal employment of this preparation Dr. Berners relates a case of malignant disease of the orbit in which a solution of six parts in a thousand was applied by the spray; the odour, which was offensive, was completely suppressed, and the growth was checked. Bichloride of mercury and eucalyptol had been applied without avail. Silicate of sodium spread over fœces destroys their odour. After autopsies the addition of the silicate to the water in which the hands are washed entirely removes all unpleasant effluvia. In addition, the author mentions cases in which the injection has proved curative in vaginal discharge.

II.—NOTES FROM FRENCH JOURNALS.

By H. R. HATHERLY, M.R.C.S.

Extirpation of the Larynx (*L'Union Médicale*).—M. Le Dentu has communicated to the Chirurgical Society a case of extirpation of the entire larynx for cancer. The patient at first declined to submit to the operation, but, as the symptoms steadily increased in gravity, he finally consented. A preliminary tracheotomy accustomed the patient to the cannula. The operation was perfectly normal, but it was necessary to remove a fragment of the œsophagus which had been implicated. The immediate results were good, with the exception of a threatening of pulmonary congestion; but at the end of the month there was a return of the disease in the roof of the mouth, and the patient died three months after an operation undertaken too late.

Prevention of Cholera by Inoculation (*L'Union Médicale*).—Dr. Gamaleia, of Odessa, who formerly was a pupil in the laboratory of M. Pasteur, and who has continued his researches in bacteriology, claims to have discovered a method of preventing cholera by a chemical vaccination. He has applied Pasteur's two fundamental principles, viz.,

that of progressive virulence, and that of chemical vaccination, and believes that he is now able to confer absolute immunity from cholera. The learned Russian doctor is so confident of the efficacy of his discovery that he offers himself as a subject for experimentation. M. Pasteur evidently considers that the results so far obtained are encouraging, as he personally brought Dr. Gamaleia's communication before the Academy of Medicine, and also the Academy of Sciences. It is to be hoped that M. Pasteur's researches will confirm the importance of Dr. Gamaleia's discovery.

Dr. Germain Sée on the Treatment of Aneurism of the Arch of the Aorta (*L'Union Médicale*).—Dr. Sée recognises the liability of those afflicted by aneurism of the aorta to become phthisical, a fact which may be readily established since the discovery of the bacillus of tuberculosis. It is only a simple coincidence. It was formerly believed that there was an entire antagonism between the blood of patients with cardiac disease and scrofula or tuberculosis. But it is not so; on the contrary, aneurism of the aorta is a disease which has a tendency to favour the development of tubercle. There is, in fact, a blood stasis in the lungs which retards the oxidation of the blood, and favours the propagation of bacilli, in the same manner that air stasis in the apex of the lung, in which residual air is retained, lead to the deposit of tubercle. For many reasons Dr. Sée discards the operations sometimes practised on aneurismal tumours, as well as energetic local revulsions, which are out of harmony with present medical theories. He is equally opposed to fili-puncture and electro-puncture, and relies upon the iodide of potassium treatment, with occasional resource to antipyrin. The effect of medical treatment may be measured by its influence on the symptoms of compression; their disappearance is the best means of control at the disposal of the physician, and the result generally satisfies the patient. If a complete cure of the disease may not be hoped for, at least its progress may be checked indefinitely. Dr. Sée has observed numerous cases of improvement, and some of apparent cure by ioduration. The *modus operandi* of iodine and the iodides is little understood. It has been pretended that these agents were blood solvents, which would evidently be contrary to the object hoped for in this particular disease. In reality, the iodides, at least in non-poisonous doses, are neither coagulants nor solvents. Except in the cases of a few people with whom the appetite is affected they may be prescribed for long periods without causing either digestive trouble or diarrhoea. They do not influence the heart's rhythm or the cerebro-spinal functions. In 1878, Dr. Sée had observed the anti-dyspnoëic effects of iodide of potassium, which produces a hyper-secretion through hyperæmia of the respiratory centre; it quickens the circulation and prevents pulmonary stases; lastly, by its oxidising and denutritive action, iodide of potassium modifies general and local nutrition, as may be easily observed in normal or diseased glands. It does not cure diseased arteries, that is to say it cannot repair the atheromatous arterial wall. Dr. Sée prescribes iodide of potassium in doses of two grammes daily, to be taken at three different times with meals; in syrup, beer, or cider, etc. Unhappily, there are cases in which, notwithstanding every precaution, it cannot be borne without producing gastric iodism. It has been proposed to substitute iodide of sodium; (1) on the pretext that salts of potash are muscular poisons; that is incorrect, and in large doses salts of soda are not so harmless as they are said to be. (2) Because the salts of potash are a poison to the heart; that is true when they are introduced into the venous system, they may then lead to dangerous accidents in doses of 1.50 grammes, but it is not so when absorbed by the digestive tract, and as much as 15 grammes have been administered without bad symptoms. (3) On account of iodism; this is produced quite as easily by iodide of sodium, which, also, has the disadvantage of necessitating a larger dose to produce the same degree of ioduration. Morphia should be banished from the treatment of aneurism. Antipyrin should alone be resorted to for pain in the chest or angina. Phenacetin is as yet little studied, and has already given use to accidents. Antipyrin, as a cardiac sedative, never produces functional disturbance.

Pleurisy in Early Infancy (*Revue des Maladies de l'Enfance*).—According to Sevestre, pleurisy in early infancy is easily recognised, but at the same time it is exceedingly difficult to form an accurate estimate of the quantity of fluid effused. For purposes of diagnosis, and in order to establish the existence of pleurisy, percussion is much more reliable than auscultation. It is difficult to prove whether fluid effused is or is not purulent, but progressive wasting and a state of cachexia should cause it to be suspected. An exploratory puncture, which is by no means dangerous, will remove all doubt. If a child loses weight, even when the effusion seems to be only serous, there should be no hesitation about removing the fluid by puncture. If the effusion is purulent, puncture is still more urgently required. Should the effusion be reproduced, and the general condition continues to be unfavourable, the case should be treated as one of empyema, and the cavity should be washed out with an antiseptic.

Typhoid Fever at Cluny (*L'Union Médicale*).—At the College and Normal School of Cluny there has been a serious outbreak of typhoid fever. The population of the establishment was 235, of whom 119 were attacked, and 12 died. No day scholar was attacked. There was an interval of three weeks between the first and second case. The sanitary arrangements appear to have been very defective, the drain from the closet passing within three or four yards of the kitchen wells.

Utero-Ovarian Gout (*Gazette de Gynécologie*).—This form of gout has scarcely been recognised by gynecologists. Dr. Mabboux, of Contrexéville, has been devoting some attention to it, and agrees with Roubaud that the cases are most frequently met with in stations where invalids are attracted by the repute of certain mineral waters. Dr. Mabboux will shortly publish a treatise on the subject, but his conclusions are as follows:—1. Gout may sometimes be developed in the female sexual organs both before and after the menopause. It exists as a metritis, a vaginitis, or even a vulvitis of gouty origin. 2. The attacks of genital gout may accompany menstruation (dysmenorrhœic form), or be produced in the interval. 3. Utero-ovarian gout is susceptible of the same hydro-mineral treatment as other gouty affections, articular or visceral, and alkaline waters may be resorted to. 4. Waters highly charged with bicarbonate of soda are indicated when the patient is not anæmic but rather plethoric, but only when there is no inflammatory condition. 5. Cold sulphate of calcium waters (Capvern, Contrexéville, Martigny, Vittel) are adapted to the majority of cases, their action being solvent, sedative, and tonic. They may be employed in all but very acute stages.

Facial Paralysis in the Newly Born (*Revue de Médecine*).—Dr. Stephan describes three different forms of peripheral facial paralysis in newly born children. 1.—Paralysis caused by the application of forceps to effect delivery. 2. Paralysis caused by lingering labour, by abnormal shape of the pelvis, or intra-pelvic tumours. 3.—Paralysis, generally accompanied by deafness, and which is truly congenital. In the two first forms a favourable prognosis is mostly justifiable, and a complete recovery may be anticipated; the third form generally lasts for life. The functional troubles which accompany the third form are not usually great, because the patient learns to accustom himself to them, inasmuch as he has never realised the normal functions of the paralysed side. When an accoucheur has determined that a facial paralysis is not due to forceps pressure, he should reserve his prognosis, for if the paralysis is the result of pressure it will mostly disappear; if on the other hand it is truly congenital, it will be incurable.

Illegal Practice (*Gazette de Gynécologie*).—Mr. Casau, the quack doctor of Rue de Bac, Paris, and who professes to cure all incurable diseases, has been condemned to a penalty of 2,000 francs for practising medicine. Another quack, named Gotiau, was sentenced to three months imprisonment. Casau (charged with homicide), accepted nothing less than ten francs for a consultation; Gotiau was content with sevenpence halfpenny. The difference of charge may account for the difference of sentence.

Paper as a Surgical Dressing (*L'Union Médicale*).—Dr. Bedoin has found in paper a material which may be used safely for surgical dressings. The paper must be free from gum, and the best kinds are filtering, tissue, or cigarette papers. The paper can be readily medicated with iodoform, corrosive sublimate, phenic acid, borac acid, etc., and may be used as a compress, the leaves being entire, scarified, perforated, twisted, or curled according to circumstances. Employed in this way absorbent paper has the advantage of being inexpensive and easily obtainable, and its application is consistent with strict listerism. It can be medicated either by immersion or spray with morphia, belladonna, cocaine, as readily as with the usual antiseptics. It has been argued that these paper dressings are liable to become hard at the most distant parts from the wound, but not only is this objection exaggerated, but it does not apply at all, when oiled silk, gutta percha, tissue, etc., are used as an outer covering. Dr. Bedoin does not consider that paper dressings are likely to supersede the more usual materials, but holds that it is a useful adjunct, especially in the emergencies which sometimes happen in country districts, when the precise thing wanted happens not to be at hand.

Fascination Produced by Revolving Brilliant Surfaces (*L'Union Médicale*).—M. Luys has remarked that a decided fascination may be produced upon larks by placing before them a revolving mirror, and he avers that analogous phenomena may be developed in certain nervous subjects of the human race. If a revolving mirror is placed before a "neuropathic" subject a peculiar and progressive sleep will be induced, which differs from natural sleep, the subject becoming cataleptic with anæsthesia of the skin. The longer the patient is submitted to the influence of the revolving mirror the more profound the sleep becomes. It is free from any unpleasantness. The awakening is readily performed by gently blowing on the eyelids. This state is essentially sedative to

the nervous system, and may be utilised not only in nervous subjects, but in the treatment of every form of chronic disease of the nervous system.

Clinical Lectures on the Diseases of Women. By G. Bernutz (*Gazette de Gynécologie*).—This book, which appeared sometime after the death of the author, comprises the whole of his works. It is essentially practical, and cannot be looked upon as a systematic treatise. It is the work, however, of a sound clinical observer, rigorously exact and conscientious, and possessing a ripe and intimate knowledge of his subject in all its bearings.

III.—NOTES FROM RUSSIAN JOURNALS.

By VALERIUS IDELSON, M.D., BERNE.

On Vesical Stone in Women.—In the *Vratch*, Nos. 9 and 10, 1888, pp. 163 and 184, Dr. S. H. Milevsky, of Riazan, describes a very rare and highly instructive case of calculus in female bladder. An extremely anæmic and emaciated peasant woman, æt. twenty-nine, married ten years, was admitted to the local Zemsky Hospital on account of incontinence of urine and vesical pain, about two months after her fourth labour. The latter had come at full term, and presented nothing abnormal beyond being somewhat sluggish (of about two days' duration), the child being unusually large. She had got up on the third day, and remained quite healthy for a month or so; but later on, there appeared hypogastric pain, painful micturition, etc. On examination, a catheter at once struck against a large, rough, immovable stone, buried in the mucous membrane, just behind the vesical neck. The woman had an intense cystitis, prolapsus of the rectal mucous membrane, and fever. In view of the size and relations of the stone, lithotripsy was thought to be dangerous, and colpo-cystotomy was unanimously agreed upon at the consultation of six hospital practitioners. The operation, performed under chloroform by Dr. V. D. Scheffer, proved very tedious on account of the stone being firmly adherent with its whole posterior half to the subjacent mucous membrane. The initial incision measured five centimetres and, beginning in three centimetres from the uterine os, ran downwards along the anterior vaginal wall, across the stone. The latter, however, could be loosened and extracted only after the incision had been enlarged, both vertically and crosswise. The concretion having been removed, the incisions were closed with eight nodose silk sutures, and sealed with iodoform collodion, while Nélaton's soft sound *à demeure* was introduced into the bladder. The patient was considerably collapsed after the prolonged operation (the loosening procedure alone required half an hour), and suffered from obstinate vomiting for the first three days. But subsequently, she gradually improved, and on the ninth day was able to sit up. When proceeding to remove the sutures, Dr. Milevsky was rather surprised to find that the wound was widely gaping from one end to the other, the vesical mucous membrane freely prolapsing into the vagina. A month later, the enormous vesico-vaginal fistula (which freely admitted three fingers) was closed with silver and silk sutures. No chloroform was administered, the operation being made absolutely painless by the sub-mucous injection of one grain of hydrochlorate of cocaine. The fistula healed satisfactorily. The stone removed weighed 140 grammes, and measured 6.9 centimetres, 5 in breadth, and 14.5 in the circumference. It had an ovoid shape, was rough, of a yellowish colour, and consisted chiefly of xanthin, only narrow superficial layer, and the nucleus being composed of phosphates. Dr. Milevsky draws attention to the following points of a considerable practical interest:—

1. In spite of her having an unusually large stone, the patient has been delivered of a live big child without any obstetrical interference, and, at the same time, without any slightest injury to herself or the infant. In this regard the case, he says, is yet unique in international annals. According to Dr. F. K. Hugenberger's monograph on labour complicated with calculus in bladder ("The St. Petersburg Foundling Home Lying-in Hospital's Reports for 1875"), in cases of Guillemeau, Louise Bourgeois, Lowdelle, and Aveling, the act was accompanied with more or less considerable injuries to the parturients. In Threlfall's case (*Edinburgh Surgical and Medical Journal*, 1829, vol. xxxi.), a perforation of the fœtus's head was made, the woman dying shortly afterwards. At the *post-mortem* a vesical stone (unsuspected before), weighing 200 grammes, was found. P. Dubois and Hugenberger were compelled to extract the fœtus with forceps, the former practitioner removing subsequently the stone too. Monod, Professor Heppner, of St. Petersburg, and Hugenberger, made (each in one case) colpo-cystotomy during labour to remove the stones, weighing respectively 86.0, 36.3, and 110.0 grammes.

2. While in an overwhelming majority of cases lithotripsy is, undoubtedly the best method for removing stones from female bladder, there are yet met with some complicated cases (such as Dr. Milevsky's)

where the procedure is dangerous or impracticable, and where colpo-cystotomy or supra-public section is indicated. Professor Podrazki recommends vaginal lithotomy, even in uncomplicated cases. Professor V. P. Dianin, of St. Petersburg, similarly thinks (1882) that this method is the best in female lithiasis, and adduces a case of his own where he extracted successfully in this way a stone measuring four centimetres in diameter. Professor K. F. Slaviansky ("Proceedings of the St. Petersburg Society of Russian Practitioners for 1882-83, p. 46) successfully removed by vaginal section an immovable stone, weighing forty-eight grammes, and even believes that the operation can well compete with lithotripsy.

3. Even most extensive vesico-vaginal fistulæ can be closed totally painlessly under cocaine alone.

4. The stone removed is one of the largest known in the literature of female lithiasis. In Dr. Anna Broomall's case (*The American Journal of the Medical Sciences*, January, 1879), the stone weighed 120 grammes; in Smith's (1868), two stones were present, 116 and 215 grammes in weight; in Hugenberger's (*l.c.*), a 110-gramme stone was excised; while Mendel published a singular case, where "a stone as large as an apple" was spontaneously discharged through a vesico-vaginal fistula. In Textor's case of a woman, æt. fifty-two, a stone of the size of a hen's egg was spontaneously expelled through the urethra. Dr. Thomas Bryant (*Medical and Surgical Transactions*, 1864) collected from the British literature as many as thirteen cases where vesical stones weighing up to four ounces had escaped in the same way.

5. Vesical stones represent a very rare occurrence in women, comparatively with men. According to Professor Henry Thompson, the registrar's reports of the Norfolk and Norwich Hospitals for the period 1770-1830 contain 700 lithotomies in men, and only thirty-five cases of lithiasis in women; while of his own 776 lithotomies, only thirteen refer to women. Keith's figures for the period 1835-68 are 304 lithotomies in men and four in women. According to Walter Coulson, the proportion of male to female cases of lithiasis is 100 to five, while Giraldès says that in boys vesical stone is met twenty-four times more frequently than in girls. Professor Winckel, of Dresden, having examined 10,000 successive female patients of all kinds during 1860-76, found (and easily extracted through the urethra) a stone only once. The same observer states that of 2,500 female dead bodies successfully examined at the Dresden Town Hospital, in six there were present stones in the bladder, and in seven concretions in the vesical mucous membrane.

[The Russian literature contains a series of valuable contributions to the subject, from which the following extractions may be given:—

Professor V. S. Basoff, of Moscow (*Moscow Inaugural Dissertation*, "De Uro-lithiasi et Lithotomia Perineali," 1841), collected 2,893 cases of lithiasis in men and seventy-five in women, his sources being the registrar's reports of the four Moscow (Mariinsky, Sheremetevsky, University's, and Town's) Hospitals and one Smolensk Infirmary.

Dr. E. E. Klin (*Langenbeck's Archiv*, 1865, vol. vi., p. 80) was able to find only four female cases among 1,792 cases of lithiasis admitted to the Moscow Clinical Hospital during 1822-1860. All the four had been cured by lithotripsy.

Dr. N. E. Mamonoff (*Moscow Inaugural Dissertation*, "On Causes of Endemic Uro-lithiasis," 1867) collected 725 cases of stone from the registrar's reports of the Moscow Mariinsky Hospital for 1808-1865. Of these 725 patients (all inhabitants of the Moscow Government), 700 were men and twenty-five women.

According to Dr. Ventzeslav Pelikan's comparative figures (*St. Petersburg Inaugural Dissertation*, "On Lithotomy in Women," 1872), gathered from international literature, of 10,975 cases of vesical stone, 10,502 refer to men and 383 to women—the proportion being, therefore, approximately twenty-seven to one. Of sixty-four female cases operated upon from 1581 to 1871, in four, calculi were removed through a simple dilatation of the urethra; in seven, by means of a more or less deep urethral incision; in four, by *sectio vestibularis*; in four, by supra-public section; in two, by lithotripsy; and in forty-three by vaginal section. In Moscow, lithotomy in women gave 5.4 per cent. deaths, its general mortality being 8.1 per cent.

Dr. F. K. Hugenberger, of St. Petersburg (*l.c.*), says that he has not met a single calculous woman among 40,000 female patients successively examined by him on account of all possible affections, pregnancy, etc. Later on, he happened to come across two cases mentioned by Dr. Milevsky. The perusal of international literature from the seventeenth century to 1875 has enabled him to collect twenty-three cases of pregnancy and labour complicated with lithiasis.

Dr. G. A. Savostitzky, of Moscow (*Letopis Khirurgicheskaho Obshchestva v Moskvë*, 1874-77), published three cases, in two of which he had successfully made lithotripsy; while in another, after a dilatation of the urethra, he had picked out with his forefinger a vesical stone of the size of a pigeon's egg, and then two others of the size of a bean.

He states further that during 1872-77 as many as fifteen girls, aged from ten to twenty, sought his advice on account of incontinence of urine, left by colpo-cystotomy for stone. The author most energetically condemns lithotomies in women; in fact, he thinks that the operation must be discarded altogether, lithotripsy alone, with dilatation of the urethra, being justifiable in female cases.

Dr. Vasilieff (*Meditsinsky Vestnik*, 1881, No. 2), basing his views on his own experience, lays down the following propositions:—1. As far as female cases are concerned, lithotomy of any kind must be given up once and for ever, since it is followed by grave complications, and associated with a high mortality (8.1 per cent.). 2. Small-sized stones can be easily extracted from female bladder after a preceding dilatation of the urethra by Simon's speculum. 3. Larger stones must be crushed and removed by portions. 4. The dilatation is borne well, and never gives rise to paralysis of the vesical sphincter or urethra.

In the *Vratch*, Nos. 48, 50, and 51, 1883 (a short report may be found also in the *London Medical Record*, February, 1885, p. 63), Dr. V. I. Radiulovitch, of Orel, published an interesting paper on rapid lithotripsy after forcible dilatation of the urethra in adult women, and adduced his first successful case of the kind. Later on, he communicated (*Proceedings of the Orel Medical Society*, April 5th, 1886, p. 3) another case, referring to a peasant girl, four years of age, in whom he removed a mixed (phosphate and urate) stone about five centimetres in diameter, the operation (including the administration of chloroform) lasting twenty-three minutes. It was followed by some fever and incontinence of urine for ten days. On the fifteenth day the little patient was discharged quite well. On the whole, Dr. Radiulovitch met eleven cases of stone in women, in one of which the urethra and vesical neck were split up (by another surgeon), though the concretion was friable, and not large. In the remaining ten lithotripsy was performed—in five by himself, in the other five by other surgeons. In two of his five, he made lithotripsy in one sitting (the cases above); in a third, a soldier's wife of twenty-eight, a phosphate and urate calculus was removed in three sittings; in a fourth, a peasant girl of four, a phosphate stone of the size of a pigeon's egg was successfully crushed (by a pair of narrow polyp forceps) in two sittings; while the fifth patient, a peasant girl of seven and a half, had a very hard stone which could be broken only in several sittings. All the patients made a complete recovery. Dr. Radiulovitch never yet met a single female case where lithotomy was indicated, and thinks that the best method is lithotripsy in one sitting, after a preliminary forcible dilatation of the urethra up to six or seven centimetres in circumference. He quotes especially Savostitzky and Vasilieff, who came practically to the same conclusion, having worked quite independently. For the sake of a statistical comparison, we may add that during 1876-82, in the Orel Zemsky Hospital, there were made 166 lithotomies (mostly "perineal lithotripsy") in men, with thirty death; of these, sixty-six were performed by Dr. Radiulovitch, with ten deaths.

Dr. S. I. Verevkin, of Moscow, describes (*Meditsinski Obozrenië*, No. 21, 1884, p. 811) 211 cases of lithiasis admitted to the St. Vladimir's Hospital for Children during 1876-84, of which eleven refer to girls. In two of the girls urethral incision was made, in seven high section, and in two lateral lithotomy. In one of the perineal cases, good recovery followed; in another, incontinence of urine remained.

Dr. A. L. Ebermann, of St. Petersburg, says (*Transactions of the Pirogovian Russian Surgical Society for 1884 and 1885*, vol. iii., p. 53) that during 1870-84 he has met seven female cases of vesical stone and foreign bodies. In one he performed lithotripsy in three sittings, without any dilatation of the urethra. In another, a servant of twenty-five, he extracted, through an undilated urethra, a hair-pin, thickly covered with incrustations. In a third, a young "noble lady" of twenty, a hair-pin, with a large stone around it, was removed after preceding dilatation of the urethra and lithotripsy. One of the fragments was as large as 1 x 3 x 2 centimetres. In a fourth, a well-to-do lady of fifty-four, a urate stone of the size of a big walnut, and of the shape of a radish, could be fairly easily extracted by means of a lithotripter through an undilated urethra. In the remaining three patients, widow ladies, aged sixty-eight, seventy, and seventy-eight, the posterior wall of the urethra was divided wholly or partially, along the median line, and the stones were removed as a whole, or nearly so, by forceps, through the urethral wound. The incision, which was always left unsutured, healed about the eighteenth to thirty-fifth day. The stones varied in their size from a small to a big hen's egg. In the eldest lady the concretion weighed about nine ounces; in the youngest (sixty-eight years of age), the whole bladder, in addition, was lined internally with rich incrustations, so that "its cavity represented something like a calcareous cavern." All the patients made a complete and permanent recovery. Dr. Ebermann's general conclusions are these:—1. Generally speaking, operations for stone in women (dilatation of the urethra, incision and division of the urethral canal, vaginal section, and lithotripsy)

are almost free from any danger. 2. They remain dangerless even in old age. 3. Neither a bloody nor a bloodless dilatation of the urethra give rise to incontinence of urine. 4. The urethral canal may completely regain its normal state and contractility after the removal of stone, even in cases of a prolonged and considerable distention by concretions embedded into the vesical cervix and internal orifice of the urethra (as was the case in the last three patients of Dr. Ebermann). 5. Supra-public section, however, seems to be accompanied in women by the same grave dangers as in men. Hence, it ought to be altogether dismissed from surgery, and this the more so that even large calculi may be removed by lithotripsy.

In the *Vratch*, No. 2, 1886, p. 28, Dr. A. A. Vvedensky, of Moscow, published an able paper on female lithiasis, based both on a careful study of his predecessors' works and researches of his own. He has collected 1,007 cases of lithiasis from the registrar's reports of the Moscow Mariinsky Hospital for 1862-85; 980 cases refer to men, and twenty-seven to women. Of twenty-nine female cases (two from the Moscow Town Hospital, in three, æt. twenty-two to forty-eight, the stone was extracted as a whole, either through a forcibly dilated (two) or an incised (one) urethra, the patients being discharged well in three, nineteen, and twenty-two days. In thirteen cases, aged from two to fifty, lithotripsy (mostly in one sitting) was performed with eleven recoveries and two deaths (from vesical diptheria on the twelfth day in one case, and from old renal suppuration on the tenth day in the other), the average stay being two weeks, the minimal four days, and the maximal twenty-six. In three, aged nineteen to thirty-seven, colpo-cystotomy was made, with two recoveries and one death (from uræmia on the fifteenth day). In the remaining ten, aged from two to seventeen, lateral lithotomy was performed, with six complete recoveries, one incontinence of urine, and three deaths (two from small-pox on the forty-seventh and sixtieth day, and one from uræmia on the sixteenth). On the whole, Dr. Vvedensky comes to the conclusion that the best method for removing stones from female bladder is lithotripsy. In cases complicated with vaginal cystocele, however, he, in common with Podrazki, prefers colpo-cystotomy, while in cases of unusually large stones he advises high section. As to lateral section (*sectio urethralis*), he repudiates it most emphatically, and adduces the words of an eminent Moscow surgeon, Dr. I. A. Goriatcheff, who said to him once: "He who has only once performed lateral section in a woman, and witnessed severe injuries inflicted by it to the patient's tissues, as well as a consecutive cicatricial deformation of her genito-urinary organs, he will most assuredly once and for ever give up this cruel method." The author regrets that lithotripsy and extraction through a dilated urethra in women are practised still relatively very rarely. He was able to collect only seventy cases of the kind, including his own.

In the *Khirurgichesky Vestnik*, September and October, 1886, p. 581, Dr. Heinrich J. Rodzewicz, of Nijni-Novgorod, published an interesting note on stone disease in thirteen Governments of North Russia, including five of Finland. He was able to collect only 190 cases of lithiasis amongst the population, observed during the current century. Of the number, three refer to women. One of the cases belongs to Dr. Zatvornitzky, of Arkhangelsk, who removed a stone of the size of a nut through the urethra in a bourgeois woman of forty. Professor Estlander, of Helsingfors, made successfully lithotripsy in a Finnish girl of twelve. The third case is that of a working woman of thirty-four, in whom a calculus was extracted by Dr. A. A. Mislavsky, of Ekaterinburg. This was the only female case met by Dr. Mislavsky during the period 1858-1886, while the number of his male calculus cases (operated upon) was forty-six, and that of all surgical operations 4,400.

Dr. N. D. Volkoff, of Orel (*Proceedings of the Orel Medical Society*, March 7th, 1887, p. 4), mentions the case of a girl, aged eighteen, from whose bladder a very large stone was spontaneously expelled through the urethra.

Dr. S. A. Voino, of Odessa, reports (*Proceedings of the Odessa Medical Society*, No. 6, 1887, p. 6, vide also a report in the *Annals of Surgery*, October, 1888) a successful case of supra-public lithotomy in an extremely weak Jewish girl of eight, with three urate stones weighing together 26.5 grammes, and measuring two and a quarter to three centimetres in diameter.

In the *Odessa Town Hospital's Reports*, 1887, vol. v., p. 210, Dr. N. A. Stroganoff, of Odessa, mentions Dr. Fricker's case of a woman, in whose bladder several stones and a hair-pin covered with incrustations were found, and extracted through the urethra.

Dr. F. I. Berezkin, of Moscow, details (*Proceedings of the Second General Meeting of Russian Practitioners in Moscow*, 1887, vol. i., p. 9) fifty-nine successive supra-public lithotomies made by Dr. V. V. Irshik in the Moscow St. Vladimir's Hospital for Children during 1884-86. Of them, four refer to girls (peasants). In all the four the vesical wound was left open, a drainage tube being introduced into the viscus. Two,

æt. two and a half and three and a half, with uro-phosphate and urate stones weighing 6.5 and 11.0 grammes, recovered in twenty-five and thirty days. The other two, æt. three and a half and four, with phosphate and uro-phosphate calculi weighing 22 and 12 grammes, died—one from catarrhal pneumonia and diarrhoea two months later, another (in whom the peritoneum had been wounded) from diarrhoea on the eighteenth day.—*Reporter*.]

IV.—AMERICAN NOTES.

MAY I call the meeting at Washington "a graded coterie of self-constituted notables," borrowing the words of Dr. Samuel Bussey? At the opening meeting in the Army Hall, on Tuesday, September 18th, less than 200 physicians and surgeons were present as representative of the profession of America. We have, you must know, fully 80,000 qualified practitioners in the States. The 200 constituted "the best men in the States, representing the culture of America, and the science." This is how it is put here. We cannot disguise the facts: 1. That the Congress was fixed at Washington as a counterblast to the late International Medical Congress. 2. That the welfare of the American Medical Association has been threatened by this new organisation. 3. That all who advocated the former Congress, or supported it, have been, I may say, ignored; this even extended to the journals. 4. That in Europe word was passed round by friends of Dr. John S. Billings detrimental to the late Congress, and in favour of this one. Hence a few well-known English surgeons were whipped up by Dr. Ord—a great friend of Dr. Billings—and a great fuss was made over their attendance. 5. It has been rumoured that bribes were held out; that LL.D.'s would be conferred on those who attended.

These facts and rumours have not surprised the profession of America, and you may take it from me that the profession of America do not intend to be ruled by a small coterie of specialists—some of whom are undoubtedly clever and eminent, but the bulk of whom are mediocre, and many advertisers. It is a matter which partly concerns your home surgeons. It will not be pleasant for the Pavey's, the Grailly Hewitt's, the Owen's, the Marston's, the Lloyd Roberts', the Lennox Browne's, who attended the International Congress, to have it circulated in America that they are only second class; that it is the Ords and the Harrisons who are really the first class! I hope you will publish my remarks in full, because we want to have our American ideas spread in Europe. Some of the English journals are here controlled or influenced by partisanship of the new party, and they only publish one-sided information.

Now for the transactions of the Congress, leaving out all further allusions to its motives. I shall give you an abstract. On the first day there was a meeting to hear report of executive, of which Dr. Pepper was chairman, and then Dr. John S. Billings, Surgeon U.S.A. Army, was introduced. You will remember that Dr. John S. Billings was *Director General* (see *British Medical Journal* of the date) of the U.S.A. Army when he gave his famous address on "Malaria" at Brighton, so that either in the American Army promotion "goes downwards," or Dr. Billings was not then *Director General*. Anyhow, he had all the credit of being a General, and that counts for something, even though he is now only a surgeon.

Dr. S. A. Bussey gave a very eloquent address of welcome, in the course of which he said: "You meet in a city surpassing in beauty and rivalling in attractiveness the more favoured and older cities of both the Old and the New World; a city representing in its population sixty millions of free people, inhabiting a domain stretching across a continent from ocean to ocean, and from the frigid north, where the summer solstice finds the earth buried in snow and ice, to the ever-green and tropical south; a city holding together in one compact community a cosmopolitan population, where education and culture need neither the blazonry of titular insignia, the heraldry of ancestral distinction, nor the glamour of wealth to command position and influence; where the lady and the gentleman can always find congenial and cultivated companionship free from the conventional and exclusive formalities which disrupt society into graded coteries of self-constituted notables; where you will not be surprised to find a place of residence that has attracted the cultivated and leisure classes from every State and city in the Union."

This paragraph exactly represents the feeling of the profession in America, and explains why, in the management of the late Congress, we refused to allow a coterie from the east coast cities absolute sway and absolute possession of all the positions of honour. America is too big for this kind of thing, and too free. The bye-laws for the guidance of future meetings were passed, and had nothing remarkable about them but the title. "The Congress of American Physicians and Surgeons" is to be the name of the organisation; this is now patented. "Congress of American Medical and Surgical Societies" would be a much better name, and a more sensible one; but *quem Deus vult perdere prius dementat*. This piece of ancient lore you will excuse;

but the meaning will be understood by the rather free translation, "medical men do not always act sensibly."

The session was resumed at 8 p.m. I only send an abstract of one paper, and shall draw a moral from this one. One of the first papers was on **Intestinal Obstruction in its Medical and Surgical Relations**.—Dr. R. H. Fitz, of Boston, read a paper in which he discussed the diagnosis and treatment especially of acute obstruction. He divided obstructions into mechanical and functional, the former comprising all cases where actual compression brought the walls of the gut into contact, the latter embracing cases of perverted or suspended action in the gut itself, such as spasm, peritonitis, perityphilitis. The danger of error in such cases was referred to, and the risk of killing the patient by drastic remedies, which were of all things contra-indicated.

Dr. Nicholas Senn, of Milwaukee, in his paper said: "Functional forms of obstruction were not distinguishable certainly from the mechanical. The mortality, until a recent date, had been great from both surgical and medical treatment—60 per cent. died. An improvement in treatment was badly needed. Delay, of all things, was to be deplored, since the delicate structures involved rapidly altered to a condition where the most skilled surgeon was helpless. Fifteen minutes were long enough for efforts at relief and reduction, or for the establishment of a diagnosis justifying delay; after that, antiseptic laparotomy presented the safest procedure. In chronic obstruction, waiting was quite different. The preliminary treatment should invariably be irrigation of the stomach with water charged with a non-irritant antiseptic, the removal of pressure, and peristalsis in the gut above the obstruction, the removal of the stomach and part of the gut contents, the prevention of subsequent gas formation, the averting of danger from vomited matter entering the larynx. He placed no trust in the distension of the colon by fluid as a means of treatment and for diagnosis, as only the lower bowel was thus affected, for the ileo-cæcal valve was impervious to liquids. Why, asked he, employ a fluid? He deplored the force necessarily used in overcoming friction and the weight of water, especially if attempts were made to force it through the ileo-cæcal valve. He used the light compressible antiseptic hydrogen gas, which, under one quarter to two pounds pressure, passed the valve, while eight to twelve pounds were needed to injure anything, even if forced from the anus to the mouth; if it escaped by a perforation into the peritoneum, it did no harm. The perforation was proved by the escape of gas. Tympanites produced by escaped hydrogen appeared where it collected above the liver. Slowness and gentleness of injection was important. Each one of many perforations was thus successively revealed until all were found. When the valve was passed a gurgle was heard, and the full pressure in the gas reservoir told the height to which the gas had gone. The site of the obstruction was thus discovered and easily followed up. Tubage of the rectum was uncertain, and limited to the lower bowel. Manual exploration of the rectum was useful for obstructions in the pelvis, as volvulus, bands, tumours pressing upon the viscera, carcinoma of the gut, and intussusceptions. A small hand was essential. Taxis and massage were good only in intra-mural occlusions and some invaginations. Uniform pressure over the whole abdomen was useful to secure rest and prevent hyper-distension. Enterostomy and formation of an artificial anus should become obsolete, as being only an imperfect means of relief, not securing diagnosis, leaving the necessity for another operation, and establishing a miserable condition for life. Only the inability of the patient to survive a radical operation, or other absolute necessity, should justify its employment. In less urgent cases, as cicatricial contraction, or to prolong life in carcinoma, enterostomy was equally safe and easy. The edges of the wound approximated by decalcified bone-plates secured rest to the parts united, and union was better during congestion than if congestion was absent. It was equally useful in gastro-enterostomy when the pylorus was occluded."

I have given you one sample of the papers read, and a very good one, so that you may judge of the *Menu* provided for the delectation of the physicians and surgeons of America. We were led to suppose that at this Congress we should be treated to a class of fare not provided by the late International or by the American Medical Association. We have been woefully disappointed. If you will take the trouble to consult Vol I. of the International Transactions, you will find papers of surgical merit equal to the above, and if you will look up the *Journal of the American Medical Association*, you will find that, at the last meeting, Dr. Nicholas Senn read a paper on the subject of intestinal lesions which far exceeds anything contributed by him at the recent gathering. The papers all through did not rise above the level of mediocrity, and the reason is simple. Our American press and societies exhaust. Our American Medical Association and our local societies always bring out all we have in the way of original matter, and of late years in the medical world there has been a comparative stagnation. We have been working out more fully the ideas started by Lister, Tait, Battey, Schroeder, etc., and the present is a period of digestion.

The American physicians and surgeons who met at Washington are not satisfied with the success of their gathering. Even their organ, the *New York Record*, is not very jubilant, and though Europe has been "drummed" by such men as Dr. B——, etc., who wrote to the *St. Louis Medical Journal*, that the profession in Germany looked down on the A.M.A., and that only *scientific* surgeons would be met with at Washington this year, and other stuff of that kind, yet France, Germany, Holland, Austria, Belgium, and even England, did not rise to the bait. Dr. Billings made many friends in London when he gave his address in 1881. Take away Dr. Ord, Sir Wm. McCormick, who acted as "drummers" for him in London, the attendance of representative English medical men was miserably small. We who supported the Congress did not object to the malcontents running this meeting on their own lines, but we did object, and do object, to the way they acted and to the false news they spread in Europe. We have conquered, and we mean now to keep up the position we have won, and we intend to keep up the American Medical Association. Dr. Billings gave an admirable address on **Medical Museums**—just the kind of subject on which he is well qualified to talk. This is his *role*, to look after *museums*, form catalogues, and to organize—valuable talent, in a way, but hardly fitting one for the office of President of an Association of the physicians and surgeons of America.

I give an abstract of part of his address. "The objects of a medical museum," said Dr. Billings, "are to preserve, to diffuse and to increase knowledge. Its conservative function is to form a permanent record of what has been demonstrated, and to fix the meaning of terms. Even in my brief experience of thirty years the terminology of anatomy, physiology, pathology, chemistry and of most of the specialties has greatly changed, and this not only by addition of new terms, but by the dropping of old ones. To get useful results from the older literature we must know the precise significance of the old works, and, in some cases, the best way to learn this is to examine the specimens prepared by those who used such terms in their descriptions. The specimens in our museum which came from the collections of Professor William Gibson and Dr. Frank Hastings Hamilton are especially valuable, because they were based on practical teaching, and should be examined by anyone criticising these teachings. A large proportion of the pathological specimens in this museum illustrate conditions which now rarely occur, forming a group which it is safe to predict will never be duplicated. It is not only that they were gathered during a great war, but that they illustrate the results obtained when antiseptic surgery, as now understood and practised, was unknown. Never again, I hope, will there be brought together such a collection of the effects of pyogenic micro-organisms on gunshot wounds, especially of bone, as may be seen in its cases. The museum also preserves, for future investigations, objects whose nature or relations are not understood at the time when they are received, and which occur so rarely that the means of studying them by comparison can only be obtained through such preservation."

Upon the function of a museum as a diffuser of knowledge, as a means of education, it is needless to dwell. That it should also strive to increase knowledge is equally certain. This is to be effected by study and comparison of its materials. The results of such study and comparison of a part of the Army Medical Museum collection have appeared in the volumes of the 'Medical and Surgical History of the War.' Another part will, I hope, soon be utilised in the study of its collection of human skeletons and crania which has been commenced by Dr. Matthew, of the army. But a considerable part is as yet only in the stage of agglomeration, and our present business is to collect and preserve, leaving to the future its full utilization. A medical museum is really used, for purposes of study, by very few persons; but through the teaching of those few its lessons are made known to the whole profession. American physicians in investigating a subject do not, as a rule, think of inquiring as to what museums can show with regard to it, simply because they have not had convenient access at large collections and are not accustomed to make use of them. Thirty years ago we were in much the same situation in respect to medical literature; but as the libraries have grown, desire for bibliographical research has grown also, and I think that in like manner when we have secured a comprehensive National Medical Museum, it will not only be made use of, but will give a powerful stimulus to the formation and progress of other more special collections elsewhere. What should be the relation of this central national collection by those formed in different parts of the country, either in connection with medical schools, or with museums of broader scope? Certainly they should help one another, and this can be done in many ways. I do not in the least object to a generous rivalry to do the best work, to have the most instructive and artistic preparations. That is a good thing. But I would say to the anatomist of a school, when you have made a preparation which is noteworthy, offer to make a copy for the national collection, where it will be seen by the anatomists of all schools and all countries. To the pathologist of a medical school I would say, after you have secured type specimens

for your own collections put aside other good specimens for the National Medical Museum, which will furnish you materials for the purpose. On the other hand, the collections of the National Museum are available for study by any proper person, and its duplicates should be used to aid other museums which may be in special need of them. In common with several of the largest and most important medical museums, more especially those of the Royal College of Surgeons and of the Faculty of Medicine of Paris, the Army Medical Museum has the advantage of being closely associated with a large medical library which is in the same building, and at present under the same direction. The increased utility and attractiveness which this gives to both library and museum is very decided."

Dr. Billings appeals to the general practitioners, and not to the specialists, in the following portion of his address. He would have been wiser had he considered them and their work before. We can rise to the occasion, even though we have been slighted.

"I have time for only a very condensed statement of the wants of our National Medical Museum. In the first place it needs the intelligent interest and friendship of the medical profession of this country. To a very considerable extent it has had this; were it otherwise it would not be what it is, nor where it is. But it needs more of it, and it can never have too much. Every medical man in this country should help a little and provide for the perpetuation of his name, as that of a physician interested in the progress of the profession, by sending at least one specimen to it. It is omnivorous in its demands for material, as will be seen by the circular which it has recently issued. But I will name as special wants, human embryos, especially those of a very early age, monstrosities and malformations of all kinds in man or in the lower animals; results of old injuries, such as fractures or dislocation, or of surgical operations, such as excisions, stumps, etc.; injuries and diseases of the eye, ear and nose; new growths of all kinds; diseases of the brain and spinal cord; and specimens illustrating the condition of bones, joints, brain, larynx, and other organs in extreme old age.

In the second place it needs a regular supply of funds from the general government. To form and keep in proper condition such a medical museum as this should be is a more difficult and expensive matter than those not acquainted with such work would suppose, and the gifts of specimens from the profession must be supplemented by ample means for the preparation, preservation, and proper display of these specimens, and also for the purchase of apparatus and typical specimens of foreign work, in order that the museum may be always able to show the latest state of knowledge and the best way of doing things.

The annual appropriation for the museum at present is \$5,000. This is sufficient, except that the printing of the catalogue, of which I shall speak presently, must be an extra charge. . . . The third need of the museum is a series of the right kind of descriptions of its specimens, given on labels and in a catalogue. Unaided by such descriptions it has for each man that which he can see in it, and no more. One man will see nothing but an old piece of bone, a shapeless mass of tissue bleached by alcohol, a case of old dingy brass instruments. Another will see in the same things a rare joint atrophy, implying curious abnormal nerve influence; a leprosy nodule, whose history, if we knew it, would reach back through the leprosy-houses of the middle ages to the far East, and whose bacilli may be the lineal descendants of those that vexed Naaman the Syrian; a case of microscopes illustrating the development of that instrument, from the first rough iron tube of the spectacle-maker of Nuremberg to the delicate and complicated instrument through which we now peer curiously into that world which lies within the world of unassisted vision. By our labours and catalogues we must tell men what to see; but to do this we must first see ourselves. The aphorism that a first-class museum would consist of a series of satisfactory labels, with specimens attached, means a good deal. Something has been done in this direction, as you will see on inspection of the cases; but I often wonder what sort of labels a man, who has spent years in investigating the normal and abnormal structure and relations of one organ, would write for our specimens of that organ. Such help as this we need; kindly, truthful criticism, the pointing out of errors and of new points of view for this kind of material.

We also need a series of printed catalogues. One of these should be in the form of compact hand-books relating to particular sections of the collection, and intended partly for the use of visitors while in the museum, and partly as a ready means of letting distant friends know what material it most needs in different departments. It should also print a complete illustrated catalogue of the whole collection for the use of the investigators and teachers of the profession. Congress has been requested to grant authority for the printing of such a catalogue by the Government printer. The material for it is nearly ready, and it would make three volumes, each the size of one of the volumes of "The Medical and Surgical History of the War of the Rebellion."

Our museum, like the library with which it is associated, includes all the specialities. No physician is so learned or skilful that he can find no instruction there, and no one is so ignorant that he cannot comprehend some of the lessons which it teaches. Taken together these institutions should contribute in no small degree to our national prestige, for which eminence in scientific work and teaching is an essential element, and if it be remembered that they are only twenty-five years old, and during that period we have been making medical history at a tremendous rate, surely some incompleteness and crudeness may well be excused or overlooked."

THE physicians and surgeons will meet again in three years' time. Will they be content to hide their light under a bushel all this time? *Nous verrons.* E. A. C.

V.—SELECTIONS FROM SPANISH MEDICAL JOURNALS.

By G. F. CADOGAN-MASTERMAN, M.D.

Actinomycosis in Man. Dr. M. Petrov (*Revista de Ciencias Médicas*, Barcelona).—To the many diseases believed to be due to fungoid growths, one of the later additions is that of actinomycosis; its cause—the fungus itself—had been frequently seen and examined during the last twenty years, but its pathogenic signification has been only recently made out, the induced disease having been generally confounded with simple abscess until about nine years ago. It is often stated that Bollinger discovered the mould in 1876, and on showing it to Harz, the latter called it the radiate fungus or *actinomycis*; but, in truth, several observers had noticed it before, and, struck by its singular mode of growth, had described it so fully that there can be no doubt of its identity with the one Harz named so happily, but from one cause or the other these isolated observations had been forgotten. For instance, Lebert, in his *Pathological Anatomy*, says, that having had occasion to examine the pultaceous discharge from a cavity in the thoracic wall of a man which had been diagnosed as cancerous, he found in it a number of greenish-yellow bodies, about the size of a pin's head, which could be easily crushed, and under moderate amplification were seen to consist of a granular centre, covered by a mass of cuneiform radiate cells, which with a higher power were resolved into round-ended cylinders, generally with knob-like projections at one or both ends. They were not attacked either by dilute acids, alkalies, ether or chloroform, and from the drawing which accompanies the paragraph one sees at once that the bodies which Lebert mistook for the hooks of some kind of tape-worm, are really parts of the fungus now known as characterising the actinomycosis of the ox.

Later they were again noticed by some Italian observers, and in 1868 and 1875 Rivolta found them in a sarcoma (?) of the lower jaw of a cow, and compared them to the retinal rods; he, also, recognised their fungoid character, and suggested the name *sarcomycis* for the disease. He tried to inoculate other animals with them, but failed therein. At the date of these later observation Perroncito showed that tumours, common about the jaws of cattle, were of parasitic origin; he detected, also, the little yellow balls, and found that they contained lime, he concluded that they were cryptogamic from the bulbar swellings on the radiating cells. However, although Bollinger was not by many the first to recognise the fungus, the credit really belongs to him of having been the first to show (1) that a disease, not infrequent amongst cattle, and which had been often confounded with scrofula or sarcoma, was the direct result of the introduction of the plant within generally the buccal tissues. It is usually first noticed as a whitish swelling at the margin of the gums, and later within the spongy portion of the alveolar processes, thence it commonly makes its way to the external surface in the form of a burrowing abscess, very rarely breaking within the mouth. The discharge resembles pus, but is thicker, an atheromatous magma of fatty cells, with the characteristic yellow foci disseminated throughout it. In these are found numerous spherical bodies—vegetable geodes—sometimes aggregated into soroses like mulberries, but generally solitary; balls of radiating fibres with claviform extremities. Their evident mycetoid character and stellate structure suggested to Harz, as we have seen, the name he gave them.

In the following year, 1878, Jacob Israel (?) published the clinical history and notes of the autopsy of two persons who had died apparently from pyæmia, but in each he found numerous swellings or abscesses containing the fungus. As he had not read the observations previously made upon it he compared the granules with certain fungi found by Bohn in concretions from the lachrymal ducts, and named by

¹ Ueber eine neue Pilzkrankheit beim Rinde. *Centralbl., f.d.m.w.*, 1887. No. 27.

² Neue Beobachtungen auf dem Gebiete der Mycosen des Menschen. *Virch. Archiv.*

him *steptothrix Foersteri*. But on showing his specimens to Langenbeck they were at once recognized as identical with organisms which the latter had met with in Kiel in 1845, and which he had then minutely figured and described.

Ponfick, in 1879 (1) examined the body of a man who had died from chronic pneumonia, complicated with pleural abscess and a number of fistulæ about the spine and shoulders. In the discharge from the latter he saw the fungus in plenty, and found that it was the same that sometimes infested the jaws of cattle in his district. Believing that this was the first example of the disease in a human subject, Ponfick exhibited his preparations at the Surgical Congress then sitting in Berlin, and expressed his opinion that Israel's cases as well as those of Langenbeck were not pyæmic, but actinomycosis, in which these latter observers concurred. The disease being now clearly differentiated, numerous cases were reported from every country in Europe, to the number of 123 in all.

There was some doubt at first—for the germ theory was not then as rampant as it is at the present time—if the fungus were a concomitant or the cause of the disease, but there can be none now that the latter is the case, and that it leads to the singular tunnelling of the infected tissues which is so characteristic of it. In the human subject the disease manifests itself by the formation of masses of circumscribed granular or fibroid tissue, which sometimes breaks down into a viscid pus or panada, but in all cases containing the pathognomonic granules, which, under a power of 400 diameters, appear spherical or polygonal, with a diameter of 0.076–0.102 m.m. granular in the centre, and covered with cylindrical or conoid cells. By treating the central portion with weak liquor potassæ and then flattening it between the covering glass and the slide it is resolved into a radiating mass of extremely delicate fibres, with dichotomous, occasionally palmate divisions. They stain well either with gentian-violet or safranin. The central portion may be regarded as the mycelium of the plant, and the club-shaped cells as conidia, but this point is doubtful. Bostrom, who succeeded in obtaining pure cultivations in blood-serum, agar-agar, and peptonized gelatine, says that the latter form only when the plant is starving, which supports the idea of their sporific character. He would remove it from the mycelia to the cladothrix group of fungi. More recently Afanasyev (2), also, obtained pure cultivations, and succeeded in inoculating various animals therefrom; he considers that the name *actinocladothrix* is better than the older one.

There can be no doubt of the infectious character of the disease, but it is not quite clear how it is conveyed from animals to man, although, as it has been found capable of growing upon living grain, and especially barley, there is no real necessity for supposing an intermediate host. People working amongst the infected grain could, under various easily imaginable conditions, inhale or swallow the germs, and in this way also, amid the dust of the cow sheds, it might easily find entrance into milk without the intervention of the animals at all. That in the greater number of cases the fungus is introduced with the food of animals is proved by its appearing so constantly in the mouth, and especially about the lower jaw, and infected barley is especially likely to be the agent, from its hispid beard so readily abrading the mucous membrane of the cheeks and gums, or finding its way between the teeth and their sockets. Amongst twenty-four pigs examined by Johne, he found in twenty-two fragments of the awn of barley sticking in their tonsils, and covered with fungoid growths. In the case of human beings this cannot so readily occur. A certain number, but by no means relatively large, amongst the sufferers had been employed about animals infected by the disease. In others the eating of their flesh has been suggested; but then it must have been very imperfectly cooked, for Israel has shown that the fungus is easily killed by heat. But many country people are in the habit of vacantly chewing ears of corn and barley in imitative bucolic rumination, and in the hollows of decayed teeth a nidus for the fungus would easily be found. He mentions in illustration the case of a Russian coachman, with very bad teeth, who used to sleep in the stable. He died from some disease of the lungs, and in the *post-mortem* there was found an actinomycotic cavity in the superior lobe of the left, and in that a hollow tooth filled with the growth. It has been shown, too, that external wounds have afforded entrance to the germs. Poleck thought that the fungus is identical with that which destroys, under the name of "wet-rot," the beams of our houses, *merulius lachrymans*. That, however, is clearly distinct; it gives rise to disease if ingested, but with very different results to those of actinomycosis, the symptoms resembling typhus, with a very elevated temperature, loss of appetite, thirst and delirium.

The duration of true actinomycosis is variable, but averages two years. Canali refers to one case of eight years, as well as to others of

shorter course; Heller to one of two and a half months; Aufrecht, of a month, and Majocchi to another in which death occurred with coincident pyæmia at the end of six days. The diagnosis can only be certainly made by microscopic determination of the presence of the entire fungus, or at least of delicate threads which divide dichotomously, although the burrowing abscess is very characteristic.

In November, 1887, the author made the autopsy of a student of philology who had died in Kazan. During his lifetime several abscesses had formed and broken, and others were found after death—one on the left side of the neck under the lower jaw, another under the left scapula, and a third in the elbow joint. The first did not communicate with the jaw; the tongue was healthy, and the teeth sound. In the chest one pleura was partially adherent, and in the right lung there were patches of consolidation. The apex was quite solid, grey in colour, with white tendinous divergent bands; in the lower lobes they were softer, and easily broken down; in all were disseminated yellowish granules about the size of millet, and strongly resembling tubercle. It was easy with the point of the scalpel to turn out from the centre of each a geode as large as a poppy seed. Here and there were small cavities containing purulent fluid and a few of the same bodies. The left lung was attacked, but to a less degree, the texture softer, and with no marked cicatricial tissue. The heart had not been invaded. In the left posterior wall of the abdomen was a large abscess filled with pus, which had dislocated the kidney and nearly destroyed the muscles in which it had been growing, and the neighbouring transverse processes of the lumbar vertebræ were corroded. The kidney was, also, greatly disorganized, rough, and wasted, partly converted into cicatricial tissue, and everywhere invaded by the fungus. In the right kidney were several cavities filled with pus. The liver and spleen were little changed, the capsules alone showing evidence of disease. The pus in the abdominal abscess and in those of the neck contained no granules; but in the mucopurulent fluid from the lungs, and the nodules disseminated throughout their substance abundance was detected, and their peculiar structure was readily made out. Much of the lungs was so completely altered that scarce a trace of their primitive tissue could be seen; in many spots groups of giant, polynucleated cells were found exactly corresponding to those of tubercle, but the masses were of larger size. Around the actinomycotic foci a network of new thin-walled blood-vessels had developed, thus preventing the caseous degeneration which is commonly the ultimate fate of tubercular deposits. Besides the spheres of the fungus in the consolidated portions of the lung, many geodes of fatty acids (cholesterine?) were present, composed of radiating crystals which might have been carelessly confounded with them.

In the minute examination of the fungus granules, especially after staining, branching threads were seen extending far beyond their surface, and around them others in process of formation, perhaps a few stellate tubes, or a simple thread rolled and twisted on itself. The author believes that the fungus propagates itself by means of these threads, which extend radially from the primary geode; that at intervals their growth stops, the end of the thread bifurcates, and a new centre forms, exactly as one sees young potatoes growing on the branching roots from the parent tuber, or in the nodes on the mycelium of the filamentous moulds, such as the *aspergillus fumigatus*.

It had been thought that actinomycosis differed from tubercle in always primarily attacking the lower lobes of the lung, but the preceding case, as well as one published by Moosbrugger, shows that this is not always so, nevertheless the empirical law is tolerably accurate. The slow process of the disease is well illustrated by the formation of cicatricial tissue—which necessitates time—and especially by the development of a network of new vessels around the infected areas.

Atrepsia, sus Causas y Tratamiento. Dr. Sejournet (*Revista Mensual de los Males Infantiles*).—The morbid condition so often seen amongst the children of the poor, which is ordinarily called marasmus, is better termed atrepsia—a *privative*, *θρεψις* *nutrition*, since the latter term indicates its cause and suggests the cure. For a vicious rather than an insufficient dietary is the cause of the mischief; food which cannot be digested, which irritates the alimentary tract, sets up flatulence, diarrhoea, and pain in the place of affording nourishment, is alone to be blamed for it. The victim can be known at a glance: the pale and flaccid features, the shrunken abdomen—when not abnormally distended by flatus—the hollow cheeks, encrusted and sunken eyes, the sharpened nose—in a word, the evidences of slow starvation—are pathognomonic; whilst its piteous wail, too feeble for a cry, indicates to the trained ear its whereabouts, before the soiled wrappings are undone which covered its miserably emaciated form and excoriated limbs. And in many cases there had been no lack of so-called food, nor means to procure plenty of it, but the error—the rejection of that which nature provides, and the substitution of some trash and sham, some phantom food alike worthless and injurious. With that complete ignorance of what really constitutes appropriate food which is so

¹ *Ueber eine eigentümliche Form prävertebrales Phlegmons.* Berl. Klin. Woch., 1879.

² *Practicheskaya Medicina*, 1887. No. 12.

characteristic of the lower class, and so often discredits even our own profession, the superiority of pure, healthy milk over all "infants' foods" is ignored or unknown. It is supposed not to be nourishing enough, and, so, that miserable nonentity arrowroot, that pretentious sham corn flour, or some unwholesome baked farina in costly packets is given in place of it, and the unfortunate child is allowed to suffer or die, "in spite of having been fed on the best infants' pabulum" (best advertised rubbish); let us rather say in consequence of it.

What should an infant's food be? Mother's milk, when healthy and in sufficient quantity, in the first case; condensed milk in the second; diluted (but not skimmed) cow's milk in the third. Nature puts no starch, dextrine nor cane sugar in the perfect food of her own preparing, and they do nothing but harm and mischief if we add them ourselves; the irritation and abnormal acidity they cause not only proves their own unsuitability, but prevents the digestion of any wholesome food which may have been given with them. And the mischief is cumulative; the acidity of the stomach curdles any milk given into solid clots, instead of allowing it to form the soft magma of healthy digestion; these clots are either vomited, or passing undissolved through the bowels, set up flatulence, colic or diarrhoea; the thirst this irritation causes leads the infant to crave incessantly for drink which only reexcites the emesis; and the vomiting, the diarrhoea and arrested assimilation constitute the disease. The remedy is—return to Nature's teaching.

VI.—OBSTETRICS.

Antiseptics in Midwifery.—This subject is in the air. We recommend to our readers two papers: one by Dr. Gaillard Thomas on the Prevention and Treatment of Puerperal Fever, the other by Dr. Fordyce Barker in reply to Dr. Thomas, who in very eloquent language urge the extreme measures of treatment suggested by Dr. Cullingworth. We give Dr. Gaillard Thomas's measures, which may be compared with Dr. Cullingworth's suggestions. Dr. Thomas's paper and that of Dr. Barker are to be found in *Transactions of New York Academy of Medicine*, 1886, vol. v., p. 121, *et seq.*

Prophylactic Measures which should be adopted in all Midwifery Cases, whether they occur in Hospital or in Private Practice (Dr. Gaillard Thomas):—

1. The room in which the confinement is to take place should have the floor, walls, and furniture thoroughly washed with a ten per cent. solution of carbolic acid, or mercuric chloride 1 to 1,000, and the bedstead and mattress should be sponged with same solution. Curtains, carpets, and upholstered furniture should be dispensed with as far as possible. (Accoucheurs in England will see at once the utter impracticability of this rule.)

2. The nurse and physician should take care that all their clothing, both under and upper, be clean, and free from exposure to the effluvia of any septic affection. Should either of them have been exposed within a fortnight to the effluvia of such affections as scarlet fever, erysipelas, typhus, septicæmia, or the like, they should change every article of clothing, and bathe the entire body, especially the hair and head, with a reliable antiseptic solution; that which I prefer for this purpose is a saturated solution of boric acid.

3. As labour sets in, the nurse, having thoroughly washed her hands, cleaned her nails with a stiff nail brush, and soaked them in antiseptic fluid, should administer to the patient a warm vaginal injection of antiseptic character; bathe the vulva and surrounding parts freely with the same. Repeat this every four hours during labour, and keep a napkin, wrung out of the warm antiseptic fluid, over the genital organs until the birth of the child. (This is done to upset all our previous ideas, and to wash away the natural discharges, which at one time were supposed to be beneficial. Nature errs in the animal world in furnishing a natural lubricant.)

4. Before assuming the functions of their respective offices at the moment of labour, both doctor and nurse should wash the hands thoroughly with soda and water, scrub the nails with a stiff brush, and soak the hands for several minutes in an antiseptic solution, 1 to 1,000.

5. The first two stages of the labour having been accomplished, the third stage should be efficiently produced, all portions of the placenta and membranes removed, and ergot administered in moderate doses three times daily, and kept up for at least nine days, for the complete closure of the uterine cavity, expulsion of clots, and occlusion of the utero-placental vessels.

6. The doctor, taking nothing for granted—not satisfying himself with a vague report of the nurse—should, at the conclusion of the labour, carefully examine the vulva of the patient. If the perineum be lacerated, it should be closed at once by suture, to shut up this avenue to septic absorption, and should slight solutions of continuity be found in the labia or the vulvar extremity of the vagina, these should be dried by pressure of a linen cloth, touched with equal parts of sol.

ferri. persulph. and carbolic acid, again dried thoroughly by pressure with the cloth, and then painted over with gutta-percha collodion. If this be thoroughly done, absorption will be prevented at these points for at least three or four days, when the application may be repeated.

7. In six or eight hours after the labour, when the patient has rested, the vagina should be syringed out with an antiseptic solution, and a suppository of cocoa butter containing from three to five grains of iodoform should be placed within it, under the os uteri. A syringe with intermittent jet should be used, which will wash away with gentle force all blood clots, and reliance should not be placed upon the feeble drip of the fountain syringe, the advantages of which are, I think, entirely theoretical.

8. These vaginal injections and suppositories should, in cases of normal labour, be repeated every eight hours; in cases of difficult labour twice as often; and they should be kept up for at least ten days, the nurse observing to the last the precautions already mentioned of washing her hands before every approach to the genital tract of the patient. (This is done so that the patient may not have the rest so much insisted on by the older accoucheurs.)

9. When catheterisation becomes necessary, it is safer to employ a new gum-elastic catheter, which before use should be thoroughly immersed in antiseptic fluid, and which should be destroyed at the conclusion of the case, rather than to trust to the nurse's cleansing of an old silver instrument, which bears within it the register of a list of cases of septicæmia in which she has employed it during the past two or three years. It is a very common and very bad habit for nurses to own silver catheters, which they carry about with them from case to case of midwifery.

10. Last, but by no means least, let the physician inform himself by personal observation as to the competency of the nurse to syringe out the vagina thoroughly, to place the antiseptic suppositories just where they should be, and to use the catheter without injury to the patient. Neglect of this precaution has frequently resulted in leaving a fetid upper segment of the vagina entirely unwashed, while the antiseptic stream was limited to the lower section of the canal.

Dr. Thomas is thorough in his recommendations, and some of the above are excellent. Dr. Cullingworth's are but a feeble copy of the above. Dr. Fordyce Barker, New York, replied to Dr. G. Thomas's paper in a long address. We can only give a few paragraphs.

Dr. Barker said: *If she who is about to bring forth "must be treated as one who is about to go through the perils of a capital operation; if all those preparations, so definitely enumerated, which gynecological surgeons insist upon previous to an ovariectomy or a laparotomy, are necessary in ordinary labours; if the danger from child-bearing be so great that a wise and prudent obstetrician is justified in subjecting his patient to the hazardous depression of intense anxiety and fearful doubt as to results, and in surrounding her with the vivid apprehension of her family, instead of stimulating and cheering her with the great happiness of maternity and the hope of increased interest and love from her husband; if all or even a considerable part of the details mentioned are necessary to save thousands of lives which are now lost, and to spare thousands of desolate households the sorrow of losing their female heads—then it seems to me evident that the State should make child-bearing a penal offence for all those families who do not have a sufficient annual income to make it possible to carry out all these requirements. Such a law could only be made effective by adopting the facetious suggestions which appeared in the 'Medical Record,' of Jan. 19, over the signature of Seth Hill, Stepney, making it compulsory for all women unable to carry out all these requirements 'to wear an antiseptic pad over the vulva from the inception of the catamenia, until the menopause, to be non-removable without strict antiseptic precautions under the carbolic spray;' and to secure this pad, it would be necessary that some State official should apply the lock, which no doubt many present have seen in the Museum of the Hotel de Cluny."*

There is no ridicule in the above, it is grave satire, which is a very different thing. Few men in the profession know more about puerperal fever than Dr. Barker, few are better qualified to speak on such a subject as partition, and what Dr. Barker has said has influenced American practice, as we see by the following account of a meeting of an American society:—

At a meeting of the Cuyahoga County Medical Society (U.S.A.), August, 1888, this subject came up for discussion. As it will probably soon form the subject of discussion in England, we give an abstract from the *Cleveland Medical Gazette*, October, 1888:—Dr. Jones occupied the chair, and called on Dr. Preston to open the discussion, who said that he did not believe in the excessive antiseptic precautions advocated by so many. They seemed to him entirely unnatural. He believed fully in cleanliness, but from what he had read he had come to the conclusion that serious mischief and a good many deaths had resulted from a reckless use of solutions of bichloride of mercury.

Dr. Herrick said that as to the question under discussion—the use of antiseptics in midwifery—it is one theory to use them to prevent putrefaction and quite another to destroy germs. In his opinion the etiology of puerperal fever was still a theory only. In 1858 they discussed this question in the French academy, and opinion was divided, one portion holding that it was an essential fever, the other holding that it always originated by infection. When the microscopists came on the stage they saw bacteria, and jumped at the conclusion that they had found the cause. His own theory was that it was the combined effect of an external agent and the condition of the patient's system. Infectious material must find its way into the system either through the veins or the lymphatics. The sharp rigor indicates that necrotic material has passed into the system through a denuded surface. Nature has its own way of protecting these denuded surfaces, viz.: by discharges pouring outwards. In his opinion these antiseptic injections poured into the genital tract were interfering with the course of nature, viz.: the outward current of the discharges. Cleanliness is all important. The condition of the system must be carefully looked into. He detailed a case of a primipara who was confined in an eight by ten feet room in which there was a base-burner, and adjoining which was a bath-room and water-closet. The labour was natural; there was no laceration of the parts; but they failed to carry out his instructions with regard to ventilation, and the third day she had a rigor. He attributed this to the bad ventilation. Under unhygienic conditions there may be enough effete material accumulated in the blood itself to cause fever. Cleanliness, pure air, cautious feeding and attention to the secretions generally, were, in his judgment, the course best calculated to give the patient the best chance of a good getting up.

Dr. Sihler said that he held himself responsible only to keep himself thoroughly clean. He used antiseptics moderately when occasion arose in the course of the case. He kept himself aseptic, and made but few examinations. Animals had no need of antiseptic pads—they were not fingered. As there was a natural coating to protect tree buds from being blasted by the germs that were floating in the atmosphere, so he believed nature did something to protect animals during parturition. Using antiseptics too freely, he believed, might do harm. The main point was clean fingers.

Dr. Powell said that it was very easy to be dogmatic than to be correct. If statistics were of any value, they showed that there was a specific germ that produces puerperal fever—that the fever is specific and the germ essential. He believed the germ to be identical with that which produces surgical septicæmia. He did not include under the term puerperal fever such accidents as the rupture of a pyosalpinx or the fevers that come from abrasions. He quoted the classic cases of Semelweis, where, after the students had been obliged to thoroughly disinfect themselves, the mortality in the lying-in wards to which they had access fell from ten and a half to one and a half per cent. He thought that the rich man's daughter was more in danger from a physician who did not believe in the germ theory than the wife of the poor man was from the necessarily unsanitary condition of her surroundings.

Some questions were raised by Drs. Vance, Dutton and others with regard to some remarks which he (Dr. Powell) had previously made in the Society, as to the medico-legal aspects of this question. They had understood the speaker to state that no man need call on him (Dr. Powell) as a witness in defence in a case of malpractice charged, where puerperal fever had resulted, unless the practitioner had used antiseptic injections. The speaker wished to state that he had been misunderstood. The point to which he attached the greatest importance was thorough disinfection of the hands. The fact that animals escaped brought out this point more forcibly. He never allowed a woman to be touched unless the hands were thoroughly scoured, and as a lubricant he used bichloridised vaseline. He rarely used injections after delivery—gets better results without. In the maternity department of the charity hospital there had been two hundred and thirty births with three deaths from puerperal fever, and during this time a hundred students, who were also pursuing their anatomical studies, were given practical instruction in midwifery.

Dr. Hart recalled vividly the teaching of Drs. Gordon and Meigs, and the injunction of the latter to “bleed, bleed her to death.” He recalled an epidemic in the early years of his practice where they were accustomed to follow out that injunction to the letter, bleeding as high as forty ounces. They knew of no antiseptics in those days. Latterly he had seen but little puerperal fever. When a case occurred, he was in the habit of reducing temperature by powerful cardiac sedatives. He believed in the moderate and wise use of antiseptics in all cases where one has reason to suspect putrefactive changes. In a majority of cases of primiparæ, injury of the genital tract takes place, but the puerperal fever occurs only under rare and exceptional circumstances. If the fever be due to the injury, how do any escape?

Dr. Vance said that it was highly necessary to be cautious in drawing sweeping inferences from statistics. Traumatism of the vagina with septicæmia, resulting from the absorption of decomposing material, would account for these cases. Wounded surfaces drawn cleanly and snugly together healed at once; but if a pocket were left, there would be decomposing material in it, and these products in contact with denuded surfaces would be absorbed. The cryptogamic vegetation in the pocket would be the same as in healthy discharges. The thing to be done was to keep the injured parts in the best sanitary condition. The speaker wished to know how it was that if puerperal fever came by the touch of the *accoucheur* in a herd of Jersey cows, if one aborted she would die of puerperal fever, and the rest of the herd would likewise abort and die; there certainly was no touch to communicate the fever in the case. As to the fact, he could vouch—he had once invested in Jersey stock with the aforesaid result. When an epidemic of puerperal fever occurred in Bellevue Hospital in the days when Drs. Fordyce Barker, Elliott, and Isaac E. Taylor were in charge, the two former would withdraw and call on the latter. Dr. Taylor would take charge of the fever cases in the hospital, and of the immense outside obstetrical practice that he had among the best families in New York city, and he never was known to carry the fever. He was accustomed to say that you couldn't carry the fever if you kept yourself clean.

Dr. Dutton said that he had no theory of puerperal fever or of bacteriology. We have seen very little of puerperal fever in private practice, though, until recently, nothing had been done in the antiseptic line. If it be of bacterial origin, why does not the whole animal creation have it as frequently as the human animal? If dirt causes it, why do not those women who live habitually in extreme poverty and uncleanness suffer from it more frequently? As a matter of fact, puerperal fever is quite as likely to occur in good families as in poor. In the opinion of the speaker, septicæmia had not received any more satisfactory definition than puerperal fever. It is probable that full statistics would show a greater ratio of deaths from the use of antiseptics to the number of cases in which they had been used than is the ratio of deaths from puerperal fever to the whole number of confinements. What this fever is, is still an unsettled question. It is undoubted that it shows a marked similarity to surgical fever. The speaker was ready to accept any theory that would explain the facts observed at the bedside. The objection to adopting the bacterial theory, unless this theory be absolutely true, is that the means of prevention and cure of puerperal fever, if this disease is due to other causes, will be overlooked or ignored, and the patient may die for want of proper treatment.

Dr. Hanson thought an immense amount of damage had resulted from washing out the uterus, with a view of preventing fever, when it ought not to have been done. If there were stinking pus, it should be washed out.

The president said, in conclusion, that he had seen but little of puerperal fever of late. A number of years ago it had followed the late Dr. Ruggles, of Newburgh, around in his practice. The latter had a number of cases, almost all of which were fatal. To the question whether any cause were known why Dr. R. should be thus unfortunate, Dr. Jones replied that there was no cause known.

The Spirit of the Societies.

BRIGHTON AND SUSSEX MEDICO-CHIRURGICAL SOCIETY, September 6th, 1888, Mr. W. H. NICHOLLS, M.R.C.S., president, in the chair.
Cancer of the Breast.—Dr. MACKEY showed a case of cancer of the breast in a woman, aged seventy, which began about eighteen months ago; it had been painless from the onset. Dr. Mackey also showed another case with which he contrasted the former, of a woman, aged fifty, who was operated on soon after detection, which recovered within three months, and proved fatal within eighteen months, with intrathoracic deposits. Chian turpentine seemed useful in arresting discharge and arresting hæmorrhage.—Dr. BLACK showed a case of blood cyst of the neck, cured by drainage, after the boy had run great risk from septicæmia.—Dr. PALEY read notes of a case of diphtheria, from which a membranous cast (which was shown) of the trachea and bronchi was ejected.—Dr. MACKEY also related a case of bronchiectasis in a youth aged twenty, admitted into the County Hospital with cough and profuse foetid expectoration, dating from a pleuro pneumonia four years previously. There were physical signs of a cavity of the right lung. Hyposulphite antiseptic inhalations were tried and the amount of purulent expectoration diminished from ten to four ounces daily; but, as attacks of pyrexia with rigors still occurred at intervals, intra-pulmonary injections of beech creasote, fifteen minims of a three per cent. solution in olive oil were commenced. The first six had no ill effects; but there was reason

to correct hæmoptysis and increase of inflammatory symptoms, with a final injection of twenty minims divided and given in two places. Ultimately an opening was made in the basic cavity, near the angle of the scapula, and a drainage tube introduced. The operation proved difficult and serious, and although there was some temporary improvement, death occurred within two or three weeks from septic pneumonia. Dr. Verrall, Mr. Turner, Mr. Sanderson, and Dr. Whittle took part in the discussion.

OBSTETRICAL SOCIETY OF LONDON, October 3rd, 1888. **A New Operation for the Cure of Vesico Uterine Fistula.**—Dr. CHAMPNEYS described a case where he had performed this new mode of operating. The cervix being held down, the anterior vaginal wall was dissected away from the cervix to beyond the limits of the fistula. By this process a hole was left in the bladder, and another in the cervix; these were closed and the vaginal wall closed with complete success. In this case Dr. Champneys used the silver sutures; those closing the two holes were cut short, while those joining the vaginal wall to the cervix were afterwards removed. Dr. Champneys used silver sutures because he was anxious not to fail in a new operation. In subsequent operations he would be inclined to try silk.—Dr. PERCY BOULTON said he had had a large experience of injuries of the female bladder, but had seen few cases of vesico uterine fistula. In each the anterior lips of the os had been torn through at the time of the accident up to the seat of the fistula. Dr. Boulton thoroughly denuded the opening of the fistulous tract at the uterine end, closing this by means of a single “purse string” suture, and at the same time repairing the torn cervix by an ordinary Emmet’s operation; the top suture in the cervix made the fistula doubly secure. He had no dread of operating on uterine tissue. In Dr. Champney’s case the fistula was comparatively accessible, and might have been pared and stitched from the uterine side after widening of the os by Hegar’s dilators if necessary. Dr. Boulton saw certain objections to the new operation. 1. The pelvic cellular tissue was opened up and freely bathed with urine during the whole of a long surgical proceeding. 2. The amount of necessary repair was more than trebled since these large openings had to be closed. Dr. Champney admitted he had used fifteen silver sutures. 3. All the sutures put into the bladder and uterus were shut up and left behind—seven in the bladder and four in the uterus. Dr. HERMAN thought that the operation was a great improvement in the treatment of these cases, as far as could be judged from the description, but very few persons had practical experience of vesico uterine fistula. He suggested that catgut sutures be used, instead of the silver wire, as it could easily be absorbed. If this were done there would be no need to pack the vagina with gauze. Mr. ALBAN DORAN referred to Dr. Bergmann’s recent bold innovations in the treatment of urinary fistulae.

On the Value of Pilocarpine in Pregnancy, Labour, and the Lying-in State.—Dr. JOHN PHILLIPS read a paper on this subject, and divided it into five parts:—1. The use of pilocarpine as an abortive. 2. For the induction of premature labour. 3. Intra-partum. 4. Post-partum and during the puerperium. 5. In albuminuria with or without eclampsia. Seven cases had been experimented upon, and the results given in detail. Dr. John Phillips said that he had undertaken his researches with the greatest impartiality. Before commencing them he had studied all the literature on the subject, and had condensed the results in his tables. He had laid a special stress upon the danger of its use in puerperal eclampsia, a matter which had not received sufficient attention. Sanger’s idea that its use might supercede the forceps was necessarily chimerical, and should not be entertained for a moment. He was sorry that all his evidence pointed to the fact that pilocarpine was not desirable as an ecbotic remedy, and that no positive evidence of its value could be adduced.

Medical Miscellanea.

THE subject of our next illustration will be Dr. More Madden.

We regret to have to record the death of Mr. F. Stanhope Hawkins, house surgeon to Guy’s Hospital, who died after a week’s illness from diphtheria.

We have received a new catalogue of Lewis’ medical and scientific lending library, and direct the attention of our readers to it. It contains an alphabetical list of authors and a classified list of subjects with the prices of books, so that its value to the doctor as a work of reference is very great.

The late Mr. Daniel Thwaites, late M.P. for Blackburn, has left to the Blackburn and East Lancashire Infirmary £10,000.

Dr. Norman Moore, of St. Catherine’s College and St. Bartholomew’s Hospital, is nominated assessor to the Regius Professor of Physic for M.D. Degrees at the University of Cambridge

The meeting of the General Medical Council has been fixed in conformity with the standing orders for the 27th November, and that of the Executive Committee for the day previous.

Mr. W. C. Millar, Registrar of the Medical Council, recently gave an admirable lecture at the Athenæum, South London, on the “Ingoldsby Legends.” It was much appreciated by a large audience.

The Harveian Lectures will, this year, be delivered in the Stafford Rooms, Tichborne-street, W., by Dr. W. B. Cheadle, on the evenings of November 29th, and December 6th, and December 13th, the subject being “The various Manifestations of the Rheumatic State as exemplified in childhood and early life.”

At a special meeting of the trustees of the Manchester Royal Infirmary the following resolution was passed without a dissenting voice, “That no assistant-physician or surgeon appointed after 17th September, 1888, shall, after becoming a physician or surgeon, hold any other hospital appointment.”

Mr. W. A. Hare, M.B., F.R.C.S.E., was entertained at dinner on the 29th September, in the Waterloo Hotel, Edinburgh, by a large number of friends to express their regret at his leaving Edinburgh and to wish him success in his new position as Professor of Surgery in Owen’s College, Manchester. Professor Sir Douglas MacLagan was in the chair.

We regret to have to record the death of Dr. Claud Taylor, of Nottingham, under exceptionally painful circumstances. He was on a visit with his wife to Scotland, and went out fishing, standing on a rock, he missed his footing and was carried by the current into a deep pool and drowned. Very general regret has been felt in Nottingham by his sad death. His funeral was attended by over 5000 people.

We notice among the arrivals by the *Etruria* on the 6th ult. Dr. Louis Baner, St. Louis, U.S.A. We regret to learn that his health has been very precarious during the last six months, but we are very pleased to be informed that during the voyage, and since his arrival in England, a wonderful improvement has set in, which we hope will continue to our welcomed visitor and distinguished American surgeon.

The first meeting of the Glasgow Medico-Chirurgical Society was held on October 5th. The following office-bearers were elected:—*President*, Dr. McCall Anderson. *Treasurer*, Mr. H. E. Clark. *General Secretary*, Mr. G. W. Dun. The officers in the section of medicine are: *Vice-President*, Dr. Wallace Anderson. *Secretary*, Dr. G. S. Middleton. *Councillors*, Dr. S. Gemmell and Dr. Hugh Thompson. In the surgical section: *Vice-President*, Dr. D. R. Knox. *Secretary*, Dr. John Barlow. *Members of Council*, Dr. Beatson and Dr. W. J. Flemming. In the pathological section: *Vice-President*, Dr. Alex Robertson. *Secretary*, Dr. J. K. Dalziel. *Council*, Dr. Millican Macewen and Dr. Henry Rutherford. In the obstetric section: *Vice-President*, Dr. E. S. MacMillan. *Secretary*, Mr. Thomas F. Gilmour. *Council*, Dr. Wallace and Dr. W. L. Reil. The treasurer’s statement showed a large balance in favour of the Society in the bank. At the close of the private business Dr. Sutherland read a paper on “The Breakdown of the Hospital System.”

Correspondence, Notes, and Queries.

Communications, Books, etc., should be addressed directly to the EDITOR, “The Provincial Medical Journal,” Horton House, Halifax.

Matters of business should be addressed to the Publisher, at the Offices, 10, Friar Lane, Leicester; or to the London Representative, Mr. E. BELLA, 58, Charing Cross Road, W.C., to whom all communications respecting Advertisements should be addressed.

We cannot undertake to return rejected MSS. unless stamps sufficient for their postage are enclosed.

We shall be glad to receive reports of Medical Vacancies, Appointments, Meetings of Societies, etc.

Papers containing passages for consideration should be marked.

Correspondents must please attest their communications with their proper name and address (not necessarily for publication).

Contributions must be written on one side only of the paper.

MSS. intended for publication to be sent in not later than the 16th of the month.

The insertion of any letter in these columns cannot be taken as necessarily indicating our adhesion to the views or statements therein expressed. The same remark applies to articles to which a name or nom-de-plume is attached.

TRACHEOTOMY AND FALSE PASSAGES.

To the Editor of "The Provincial Medical Journal."

SIR,—I should be pleased to know if there is any other case on record, besides the one reported by Sir Morell Mackenzie, where even the patient—let alone a doctor—has made a false passage by the insertion of a tracheotomy tube? Surely this is an operation requiring an expert.—Yours,
MEDICAL STUDENT.

THE TREATMENT OF SUMMER DIARRHŒA, ENGLISH AND ASIATIC CHOLERA.

To the Editor of "The Provincial Medical Journal."

SIR,—I find that the biniodide of mercury, given in pills to adults, of the strength of $\frac{1}{16}$ th of a grain three times a day, and in powder, with two or three grains of sugar, to infants and children, of the strength of $\frac{1}{32}$ nd or $\frac{1}{64}$ th of a grain, three times a day, effects a rapid cure of the most urgent cases of summer diarrhœa and English cholera. For the relief of the intestinal spasm and the collapse I give ammonia and belladonna. The small dose of biniodide required is an illustration of the adage, "A little leaven leaveneth the whole lump." As a bactericide, the biniodide has no rival, and I have no hesitation in affirming that it would prove an effectual prophylactic and curative agent in Asiatic cholera.—I am, Sir, your obedient servant,

Clayton House, Accrington,
Sept. 25th, 1888.

C. R. ILLINGWORTH, MD.

DR. WOLFE'S OPINION OF THE TREATMENT OF ULCERATION OF THE CORNEA AND KERATACONUS BY THE ACTUAL CAUTERY.

To the Editor of "The Provincial Medical Journal."

SIR,—As the writer of one of the papers referred to in the paragraph under the above heading, which appeared in your last issue, I feel it incumbent upon me to ask your permission to make one or two observations upon Dr. Wolfe's criticism on the use of the actual cautery in eye disease. No one doubts Dr. Wolfe's qualifications to give a historical dissertation upon the surgical use of the cautery from the "Homeric period" down to our own day, but his strictures upon the modern method of applying this valuable remedy to certain affections of the eye will not be of much weight until he has given evidence of more practical acquaintance with it, and especially until he has divested his mind of such encumbrances as "logs of wood" and "hot poker." Dr. Wolfe knows, or ought to know, that all this ancient history is beside the question. We have made some little advance in the matter of implements since the "Homeric period," and at the meeting at Glasgow, where he made his remarks, Dr. Wolfe had the opportunity of seeing the instruments which I and others use for the purposes of the cautery. I venture to say that his patients will not enjoy the full benefits which the art of surgery, as practised in the present day, is capable of conferring upon them, until he has become possessed of these instruments, and until he condescends to use them in the numerous cases to which the actual cautery is applicable. I can sympathise with Dr. Wolfe in the "many disasters" which he says he has seen resulting from the use of the cautery; but I can also say after a somewhat extensive experience of it, in ulcerative conditions as well as in conical cornea, that I cannot recall a single instance in which I regretted its employment. I believe that, in spite of Dr. Wolfe's somewhat clumsy ridicule, it will soon become an indispensable means of combating conditions hitherto attended with disastrous consequences. As regards keratoconus, surely Dr. Wolfe cannot seriously mean that the aim of an operation is to produce an opacity at the apex of the cone. I have always understood the object of the surgeon to be the restoration of the normal curvature of the cornea with as little opacity as possible, and for that purpose I know of no means so safe and so simple as the method by the actual cautery.—Yours truly,

RICHD. WILLIAMS,

Oct. 6th, 1888. Surgeon to the Liverpool Eye and Ear Infirmary, etc.

Bibliographical Record.

BOOKS, PAMPHLETS, ETC., RECEIVED.

The Mineral Water and Baths of Ashby-de-la-Zouch. By Charles R. Williams, M.B., M.C. Edin., etc. pp. 24. Barker, Ashby-de-la-Zouch.

The Art of Dispensing: a Treatise on the Methods and Processes involved in compounding Medical Prescriptions. 8vo. *The Chemist and Druggist*, 42, Cannon Street, London.

Test Types, with Hints to Teachers how to Test Distant and Near Vision. By G. Abbott, M.R.C.S. London: Pickard and Curry. These test types will be found useful, not only to teachers, but to general practitioners. They are mounted, and can be hung up in a consulting room or surgery.

The Intestinal Diseases of Infancy and Childhood, Physiology, Hygiene, Pathology, and Therapeutics. By Abraham Jacobi, M.D. George S. Davis, Detroit, Mich.

PERIODICALS RECEIVED.

AMERICAN:—

1. The Journal of the American Medical Association.
2. The Therapeutic Gazette.
3. Medical Register (Philadelphia).
4. New York Medical Journal.
5. Medical Record (New York).
6. The Medical Bulletin (Philadelphia).
7. New England Medical Monthly.
8. Medical Times (Philadelphia).
9. The Polyclinic (Philadelphia).
10. The Analectic.
11. The Medical Standard (Chicago).
12. The St. Louis Medical and Surgical Journal.
13. The Denver Medical Journal.
14. Annals of Gynecology (Boston).
15. The Medical News.
16. The American Lancet.
17. The Medical and Surgical Reporter.
18. The American Druggist.
19. The Western Medical and Surgical Reporter.
20. The South Western Medical Gazette (Louisville).

BRITISH:—

21. The Philanthropist.
22. The Practitioner.
23. The Medical Chronicle.
24. The Medical Press and Circular.
25. The Journal of Microscopy and Natural Science.
26. The Indian Medical Gazette.
27. The Australasian Medical Gazette.
28. The Hospital Gazette.
29. The Journal of Rhinology.
30. The Birmingham Medical Review.
31. The Ophthalmic Review.
32. The Pharmaceutical Journal.
33. Public Opinion.
34. Health.
35. The Chemist and Druggist.
36. The British and Colonial Druggist.
37. The Australasian Journal of Pharmacy.
38. The Nursing Record.
39. Diet and Hygiene.

FRENCH:—

40. Journal de Medecine de Paris.
41. L'Union Medicale.
42. Le Progrès Medical.
43. Bulletin Général de Thérapeutique.
44. Gazette de Gynecologie.
45. Gazette Hebdomadaire des Sciences Medicales.
46. Journal de L'Ouest.
47. Journal du Nord.
48. Revue Pratique d'Obstetrique et d'Hygiene de l'Enfance.
49. Annales de Gynecologie et d'Obstetrique.

GERMAN:—

50. Centralblatt für Kinderheilkunde.
51. Centralblatt für Gynecologie.
52. Centralblatt für Chirurgie.
53. Illustrierte Monatschrift der Artzlichen Polytechnik.
54. Der Fortschritt.
55. Fortschritt der Medecin.
56. Chemiker Zeitung.

ITALIAN:—

57. Lo Sperimentale.
58. Rivista Italiana.
59. Rivista Internazionale di Medicina.

PORTUGUESE:—

60. A Medicina Contemporanea.

RUSSIAN:—

61. Vrach.

SPANISH:—

62. Rivista Clinica de Barcelona.

TURKEY:—

63. Revue Medico-Pharmaceutique (Constantinople.)

THE Provincial Medical Journal:

A MONTHLY REVIEW OF MEDICAL SCIENCE, LITERATURE, AND BIOGRAPHY.

VOL. VII.]

DECEMBER 1, 1888.

[No. 84.]

Our Portrait Gallery.

DR. MORE MADDEN.

THE subject of our present engraving is Thomas More Madden, of Merrion-square, Dublin, whose recent address as President of the Obstetric Section of the British Medical Association appeared in the September number of this journal. He was born in the Island of Cuba, where his father, the late Dr. R. R. Madden, F.R.C.S. Eng., then filled the office of British representative at the Havanna, in the International Commission for the Abolition of the Slave Trade, to which he was appointed by Lord Palmerston, and for which he had relinquished an extensive practice as a physician in Curzon-street, Mayfair, London. Dr. Madden, senior, who died in 1886, was not only a prominent member of the anti-slavery party, but was also a prolific and well-known writer, having in the course of his long and varied life published more than forty volumes. Amongst these we may here mention his "Travels in the East," "History of the United Irishmen," "Life and Correspondence of Lady Blessington," "Biography of Savonarola," "The Infirmities of Genius," "History of Periodical Literature," etc.

Dr. More Madden entered on medical studies at the age of fourteen, when he was apprenticed to the late Mr. Cusack, Surgeon-in-Ordinary to the Queen in Ireland. Shortly before the completion of pupilage, however, he was forced by symptoms of pulmonary disease to remove to a more genial climate, and the next few years he passed in the South of Spain, Italy, and France, completing his professional studies in Malaga and at the University of Montpellier. Having graduated as a physician, after he returned home in 1862, he became a Member of the London College of Surgeons, and is also a Member of the Dublin College of Physicians, and a Fellow of the Royal College of Surgeons of Edinburgh. After a further period of health travel in Southern Europe, Egypt, Africa, and Australia, he settled down in practice in Dublin, where he married the eldest daughter of the late Thos. McDonnell Caffrey, Esq., of

Crosthwaite Park, Kingstown, by whom he has two sons and one daughter surviving. In 1868, having adopted obstetric and gynæcological practice as a specialism, Dr. More Madden was appointed Assistant Physician to the Rotunda Lying-in Hospital. On retirement from that office three years later, he was accorded the special thanks of the governors for "zealous and efficient discharge of his duties, and uniform kindness to the patients." In 1872 he received the French bronze cross, in recognition of services in connection with the organisation of the Irish Ambulance Corps employed during the Franco-Prussian War. In that year, being also Examiner in Obstetric Medicine in the Queen's University, he was appointed Physician to the newly-established Hospital for Sick Children, Dublin; and not long afterwards became Obstetric Physician and Gynæcologist to the Mater Misericordiæ Hospital. In addition to these appointments Dr. More Madden is Consultant to the National Lying-in Hospital, and other institutions. In 1878 he was elected Vice-President of the Dublin Obstetrical Society; in 1885 Vice-President of the British Gynæcological Society; in 1886 President of the Obstetric Section of the Academy of Medicine; and at the present time he holds the office of President of the Obstetric Section of the British Medical Association. He has been also made Honorary or Corresponding Member or Fellow of many medical and scientific societies at home and abroad.

Besides a vast number of contributions to medical journals, and several articles in Quain's "Dictionary of Medicine," and other standard books, Dr. More Madden's writings include the last edition of "The Dublin Practice of Midwifery," "Change of Climate in Chronic Disease," 3rd edit. 1876; "Spas of Germany, France, and Italy," 1874; "Contributinal Treatment of Chronic Uterine Disease," 1878; "Mental and Nervous Disorders Peculiar to Women," 1883; "Lectures on Gynæcology," 1886; "Child Culture—Mental, Moral, and Physical," 2nd edit. 1887; "On Uterine Tumours," 1887; "Treatment of Dysmenorrhœa and Sterility," London, 1888; "The Health Resorts of Europe and Africa," 2nd edit. 1888. The latter work has been republished in America.

Original Communications.

VOMITING AS A SYMPTOM.¹

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AT the present day, in the face of the remarkable advances in our knowledge of pathology and of pathological anatomy, it is almost necessary to apologise for speaking of, and still more for treating symptoms. Still, in bedside work, we have to deal largely with symptoms; and I am satisfied that it would tend greatly to render our knowledge not only more accurate, but also *more readily available*, if we took individual symptoms and traced them in their variations through a series of diseases. This is somewhat of the mental process required in making a diagnosis. I have endeavoured to carry out this suggestion in some small measure with regard to vomiting, which, while one of the commonest of symptoms, remains one of the most important, inasmuch as it tends so seriously to interfere with nutrition. It is frequently, too, a matter of no small difficulty to trace it to its true or primary cause. It will be evident to you that the subject is too wide for me to attempt to do more than sketch out a plan and discuss one or two of the headings. When vomiting is at all severe, it is apt to become, at any rate for the moment, the most important element in the case; and in attempting to treat it we have first to decide which system is primarily at fault. Vomiting occurs not unfrequently in the early stages of various acute infectious diseases, especially in children, and sometimes in the later stages. In the latter instances it appears often, or perhaps generally, to be due to changes in the gastric mucous membrane, of which I showed you illustrations about this time last year.

In connection with *diseases of the vascular system*, heart disease and aneurysm are the two most important. Of the latter I shall have something to say as regards pressure on the œsophagus; of the former I will only say this: that there is a vast number of cases treated as dyspepsia, that depend on venous congestion of the stomach from heart disease.

Vomiting in Affections of the Nervous System.—It will suffice to mention vomiting from emotional conditions, nervous shock, pain, and unpleasant sights and odours. In coarse brain lesions, vomiting is apt to become a much more serious and urgent symptom. Its dependence on brain disease is usually apparent, though in the early stage of some cases, and especially in tubercular meningitis in children, the connection with brain lesion may remain for some time unsuspected. One of the earliest and most valuable guides is a *slowness and irregularity of the pulse*. This, with often a variable degree of albuminuria, and with eye changes such as squint or neuro-retinitis, will establish the diagnosis. The characteristics of the vomiting are that it is sudden, variable, not in relation to the taking of food, unaccompanied by nausea or coated tongue, and not much, if at all, influenced by remedies. Vomiting in hysteria, and the cases which, for want of a better term, we may call "*nervous vomiting*," but in which there are no other signs of hysteria, are among the most interesting and important with which we have to deal. While seldom fatal, they may sometimes endanger life, and short of that

generally embitter the patient's existence. They also form some of the most difficult and intractable cases which the physician is called upon to treat. The following cases will afford illustrations of some of the different varieties of nervous vomiting:—

CASE 1.—About three years ago, when summoned to see a case of tubercular laryngitis in a lady, in a convent in a neighbouring county, I was at the same time asked to see a lay sister, or servant. She was, I think, a kitchen-maid, about thirty-eight years of age, and able to get through a considerable amount of work; and yet for something like twenty years she had vomited a quantity of partially digested food about two hours after her dinner every day. She was never sick at any other part of the day, never brought up any blood, and maintained a fair state of nutrition. It seemed to have become an established habit, and there was no sufficient ground to suppose that there existed gastric ulcer, or any other serious organic change. She lived in the midst of an essentially neurotic community, whose abnormal mode of life gave a very perceptible bias to all their forms of illness. She did not suffer materially in health, though complaining of daily gastralgia. The pain and the vomiting had never been influenced by very varied treatment.

CASE 2.—In 1886 I was urgently summoned one evening to go into Derbyshire, to see a lady who was supposed to be in imminent danger. I found that she was thirty years of age, and had always been delicate. About four months previously she had been confined of her third child, which she continued to suckle. She had not been able to suckle the other two children. She had a somewhat similar attack to the present, but much less severe, just before the birth of the second child. Her illness began with vomiting six days before I saw her, and in the afternoon they had become so alarmed at her condition that I was summoned to meet her usual attendant. I found her pale and anæmic, with a pulse of 108, temperature 99°, and a tongue coated in the centre with a thick white fur. She complained of epigastric pain, and of vomiting very shortly after everything she took. There was no distention of the abdomen, or tenderness on pressure. The bowels had not been moved for six days. For the past two days she had taken literally nothing but frequent small doses of brandy and water, and champagne. She was extremely emotional and odd, and was accustomed to get upon her hands and knees on the floor, as the position that afforded most relief to the epigastric pain. Her symptoms were not suggestive of serious gastric disease, and bearing in mind her emotional condition, I came to the conclusion that the vomiting was essentially nervous. A transient gastric catarrh had excited this condition in an emotional subject, whose strength had been reduced by parturition and lactation. If there are two drugs in the use of which caution is required in such cases, they are morphia and alcohol. Morphia may be used often with considerable benefit, once or twice, and preferably by hypodermic injection, but the morphia habit is exceedingly easily acquired by such patients. Alcohol, usually in the form of brandy and water, is generally freely resorted to, and serves to increase the gastric catarrh. The majority of cases are much better without stimulants of any kind, but if some compromise is necessary, good champagne is the most suitable. From being effervescent it tends to relieve the sickness; it is the most rapidly diffusible alcoholic stimulant, while containing but a moderate amount of alcohol; and from its costliness and for other reasons it is less likely in most patients to set up

¹ Presidential address read before the Nottingham Medico-Chirurgical Society.



Yours very sincerely
Thos Moore Madden

drinking habits. The most important part of the treatment is moral. To allay the excitement of the patient and her friends by an assurance of the absence of danger; to lay down definite and precise directions, and to induce the friends to carry them out strictly, at the same time inspiring the patient with confidence in their efficacy. My patient was well in a few days under the following treatment:—A simple enema as an aperient, complete rest to the stomach for several hours, with a quarter of a grain of morphia hypodermically if necessary; and then milk, or milk and lime-water, beginning with teaspoonful doses every hour; and if that was returned, pancreatised milk. Why will not people rest their stomachs as they would rest a bruised or injured limb? But instead of that we generally find them in such cases as the above alternating brandy and water, arrowroot, beef tea, and milk, in such rapid succession as would upset the most robust stomach. And, finally, in some few exceptionally obstinate cases, the stomach may require complete rest for one or two days, the patient meantime receiving nutrient enemata of pancreatised milk, beef tea, etc.

In addition to many somewhat similar cases, I have recently seen one in consultation with my friend Dr. Rothera, which was much more obstinate, and seemed not unlikely to result in a fatal termination. The patient was, as in almost all these cases, a woman, aged thirty, married ten years, but without any family. She had been subject to marked hysterical attacks for many years. She had an undeveloped uterus, some ovarian tenderness, and very obstinate constipation, the bowels when I saw her not having been moved for seventeen days. Vomiting commenced just a week before I saw her, and had continued from half a dozen to a dozen or more times a day ever since. It was not influenced specially by food. She brought up bright green watery fluid to the amount of several pints, apparently more in quantity than the fluid she swallowed. There was no epigastric tenderness, but the abdominal muscles were kept very rigid. She complained of frequent "globus hystericus," which, she said, commenced just above the pubes, rose up to the throat, and then produced vomiting. She said that mustard over the epigastrium exaggerated the pain, and caused stiffness of the arms. She had the most typical hysterical tremor affecting chiefly the upper extremities, and associated with chattering of the teeth. She had received a great variety of medicinal treatment, but without any influence on the sickness. Morphia had been tried, but always produced troublesome urticaria. She was a small delicate woman, painfully thin, very feeble, but without any heart murmur. She had recently been overworked somewhat, her rest had been much disturbed by an aphthous ulceration at the orifice of the vagina, which had caused much discomfort and painful frequent micturition. She had also recently been menstruating every fortnight instead of every month. She had suffered much from facial neuralgia, for which she had had all her teeth removed, and wore an artificial set. There was thus abundant cause in a delicate woman for imperfect nutrition and impaired nervous tone. I ordered exclusion from her numerous anxious friends, a dark room, friction of the arms and legs, a small blister to the epigastrium, a castor oil enema, and half grain of cocain with some bicarbonate of soda, in solution, thrice daily by the mouth. All brandy to be stopped, and a tablespoonful of milk and lime-water, iced, to be taken every half-hour, regardless of sickness; and, as she had been sleepless for a long time, a draught of bromide of potassium and chloral

for one night only. The latter, though given in full doses, failed to produce sleep, but made her uncomfortable. I am convinced it was a mistake; the treatment directed against the vomiting was, however, quite successful, and she was only sick twice after I saw her. Dr. Rothera had all along viewed the case as essentially one of neurotic or hysterical vomiting, but felt that the extreme prostration justified the alarm of the friends. When I saw the patient she was so feeble that I should not have been at all surprised if she had died of simple inanition. In a case of hysterical dysphagia with regurgitation of food and vomiting from spasmodic stricture of the œsophagus, published separately, I have seen a most alarming degree of feebleness arise, and the most imminent danger of death from inanition.

The last case of hysterical or nervous vomiting I propose to bring before you relates to a girl, æt. eighteen, who was admitted under my care into the Nottingham General Hospital, in March, 1887, with amenorrhœa of eleven weeks' duration. She had definite symptoms of hysteria. She is well nourished, but has very obstinate constipation. Menstruation commenced at seventeen, was scanty, and accompanied by very much pain. She only continued regular for three or four periods. She is now (October, 1888) nearly twenty years of age, and has only menstruated twice, for part of a day each time, during the past two years. The uterus is well developed, and in normal position, but the ovaries are enlarged, indurated, and tender. During the past two years she has had very frequent attacks of vomiting, but not at sufficiently regular intervals for the vomiting to be fairly called vicarious. The tongue becomes thickly coated, and she vomits sometimes undigested food, sometimes considerable quantities of blood. It is uninfluenced by dieting or medicines, and in about ten days the tongue cleans, and the vomiting ceases, and she takes her food as usual. But the interesting feature of the case, and one I have much difficulty in explaining, is, that during these attacks of vomiting the urine contains albumen. This has been verified on numerous occasions. In the intervals the albumen disappears. When the patient noticed the attention paid to the urine, her natural hysterical obliquity led her to put milk in it. This was of course readily detected. I have met with the same source of error many times. Afterwards the urine was on several occasions drawn with a catheter by the 'sister,' and examined at once, and found to contain albumen, but no casts or epithelial elements. In a week or ten days it would entirely disappear, together with the vomiting and the foul tongue.

Perhaps the most troublesome as well as the most constant feature of cases of vomiting depending on affections of the nervous system is the very slight degree, if any, in which they are influenced by medicinal remedies. Drugs which readily check vomiting from gastric disease are in such cases powerless. Of the vomiting in pregnancy, of sea-sickness, and of the gastric crises of locomotor ataxy I do not propose to say anything.

Vomiting in Affections of the Alimentary System.—Vomiting is, of course, one of the commonest symptoms of stomach affection. I intend to speak, however, only of gastric ulcer, for that is in my experience one of the most difficult diseases to diagnose with anything approaching certainty. Many of the cases of perforating ulcer of the stomach (perhaps I should be nearer the truth if I said the majority) are not suspected till perforation has taken place; and of

the cases which do not perforate the vast majority recover, and the correctness of the diagnosis is never established. Vomiting is, I think, an essential symptom, and vomiting of blood a valuable one. But blood may be absent from the vomit from first to last, and on the other hand frequent and even fatal hæmatemesis may occur without any discoverable lesion of the gastric mucous membrane. I have shown that hysterical vomiting may be most urgent and intractable. Epigastric pain and tenderness is most variable, and occurs in all degrees in very various affections of the stomach, and other viscera, and may be absent in gastric ulcer. The diagnosis, therefore, bristles with uncertainties. There is no doubt that gastric ulcer occurs by far the most frequently in females, and that anæmia is a very powerful, if not an essential predisposing cause.

Among upwards of 650 consecutive cases that have been under my care in the Nottingham General Hospital, during the past three and a half years, and of which I have complete records, I have rightly or wrongly diagnosed gastric ulcer in ten—three males and seven females. In each case there was vomiting of blood. They all recovered except one very obscure case of extensive destruction of the walls of the stomach in a man, a full account of which is published at p. 230 of vol. 37 (1886) of the Trans. of the Pathological Society. It is doubtful whether it was originated by corrosive poisoning. The other cases are as follows. The first is interesting on account of the age of the patient, and the rapid way in which he gained weight afterwards.

CASE 1.—J. C—, æt. fifteen, was admitted in July, 1885. His illness began sixteen weeks before admission with loss of appetite, and pain immediately after food. On two occasions he brought up about a tablespoonful of blood. For the last few weeks he has had pain and sickness after every meal. The interval between taking food and vomiting varied between a few minutes and half an hour. His tongue was quite clean. There was no heart murmur. He had tenderness on pressure in the epigastrium. On admission he vomited even after drinking simple cold water. All food by the mouth was stopped, except a little ice to allay thirst, and for four days he was fed by nutrient enemata. After that he had a little pancreatised milk by the mouth. The only medicine was morphia in small doses subcutaneously. He rapidly got well, and in three weeks gained a stone, weighing 5st. 6lb. for a height of 4ft. 7in.

CASE 2.—The other male case was a lad, æt. seventeen, also admitted in July, 1885, complaining of pain in the stomach, relieved by vomiting. His illness began three years ago. The pain came on five or ten minutes after eating. He vomited a large quantity of coffee-coloured fluid the day of admission. He was treated with morphia and hydrocyanic acid, and milk diet. He gained 10lbs. in less than a month, and went out well.

The female cases are very shortly as follows:—

CASE 3.—E. W—, æt. twenty-four; felt very faint, and shortly afterwards vomited about a quart of blood. Treated as in the previous cases, and soon well.

CASE 4.—M. L—, æt. twenty-two, brought up considerable quantities of blood on several occasions; vomited immediately after everything she took; obstinate constipation. Treated by rest in bed and iced pancreatised milk. Did not vomit again, and was soon well.

CASE 5.—L. S—, æt. twenty-four, a waitress, extremely anæmic. Pain in the left hypochondrium, relieved by

lying down; frequent vomiting, once of about a tea-spoonful of blood; soon well.

CASE 6.—E. C—, æt. eleven; frequent vomiting after food, and often of blood; soon well.

CASE 7.—H. M—, æt. forty-five, complained of pain at the lower part of the stomach, and of vomiting. She had never been strong. Five years ago she used to bring up blood occasionally. Her present attack began about a month ago. A week before admission she vomited several ounces of blood. She was treated by soda and hydrocyanic acid, with pancreatised milk, and soon went out well.

CASE 8.—F. M—, æt. twenty-two, complained of pain at the stomach after food, and vomiting of blood. Four years ago she used to spit blood. She had some old lung mischief, but no cough. She was extremely anæmic, and had a loud hæmic murmur. She had obstinate constipation and amenorrhœa. She soon got quite well, and remained so.

CASE 9.—F. W—, æt. nineteen, a domestic servant, complained of pain at the epigastrium, and vomiting after any kind of food, even milk. The day before admission she vomited about half a pint of blood. She was somewhat hysterical, extremely anæmic; had amenorrhœa six months, and constipation fourteen days. She soon went out well.

I next come to a very interesting and important group—namely, cases of œsophageal disease. In some instances the affection causes regurgitation of food; sometimes true rumination; and sometimes vomiting; but all these conditions are generally described by the patient as vomiting. Well marked dilatation of the œsophagus, especially when not associated with malignant stricture lower down, is a very rare condition. In a case fully described by me in the Transactions of the Pathological Society for 1888 (vol. 39), vomiting was the chief complaint.

In dilatation of the œsophagus regurgitation of food may take place a few seconds after swallowing, or be delayed half an hour, an hour, or even longer. And, further, the regurgitated food may undergo varying degrees of putrefactive changes nearly allied to gastric digestion. The difficulty of diagnosis, therefore, occasionally, between regurgitation of food from a dilated œsophagus and true vomiting of the contents of the stomach may be exceedingly great. There are two points which may be of much use in forming a diagnosis. They are, that the regurgitated food from a dilated œsophagus does not, unless accompanied by gastric vomiting, contain either the acid secretions of the stomach or bile. The difficulty, however, remains that bile is generally absent from the rejected contents of the stomach; and in certain diseases of the gastric mucous membrane the acid secretions of the stomach may likewise be absent. In a case of broncho-œsophageal fistula, also published in the Trans. of the Path. Society for 1887, vomiting of food was the chief symptom, difficulty of swallowing never being complained of. In mediastinal growths pressure on the œsophagus is not unusual, and I have met with several instances where vomiting and difficulty of swallowing have been the most urgent symptoms. Of the other causes of vomiting I must say but very little. Addison's disease is now and then accompanied by very obstinate and intractable vomiting. Of vomiting from supposed functional derangement of the liver—so-called bilious attack—I have no definite knowledge. I do know, however, that in the different forms of hepatic cirrhosis vomiting is met with not unfrequently, and often of blood.

Also in some few cases of carcinoma of the liver vomiting is an early and important symptom. Of vomiting from intestinal obstruction, hernia, and nipping of the bowel, peritonitis, etc., I have nothing to say, except that such cases are totally uninfluenced by medicinal remedies. And lastly, vomiting may be due to affections of the respiratory system. I have already alluded to coughing reflexly causing vomiting. Inflammatory and irritable conditions of the larynx are also specially liable to bring about the same result. One of the most troublesome cases of dysphagia and vomiting I have ever met with was in a man, *æt.* sixty, with a rapidly fatal tubercular laryngitis.

There are still many omissions that I should have liked to have supplied, had time allowed, before bringing to a close this imperfect sketch of "Vomiting as a Symptom."

ON CERTÉL'S METHOD OF TREATING CHRONIC DISEASES OF THE HEART.

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THE substance of Professor Certé's communication to the Medical Congress at Wiesbaden is as follows:—There are two methods of treating chronic diseases of the heart—dietetico-mechanical and medico-pharmacological.

The dietetico-mechanical system is complete in itself, and with its indications and counter-indications may be considered alone. The changes in the muscular substance of the heart by pathological processes are quantitative and qualitative. The quantitative modifications are either an increase or a diminution of the muscular substance, which may be absolute or relative, affecting a part or the whole of the organ. Muscular increase or hypertrophy is rarely a disease of importance in itself. It is generally the result of increased work thrown upon the heart, as a result of obstructed circulation, in consequence of valvular mischief, aneurism, compression of the arteries by tumours, insufficiency of pulmonary circulation, or the destruction of capillary tracts in the lungs or kidneys. Hypertrophy of the heart, which is gradually developed by increased work, is now considered to be a compensating hypertrophy in order to overcome any obstacle to the circulation. As a rule the medical man should maintain the hypertrophy or endeavour to re-establish it when weakened or lost. A diminution of the muscular substance of the heart, without any degenerative process attacking the whole organ, will often be found to accompany or follow a disordered general nutrition as well as a diminished blood supply in anæmia, chlorosis, old age, or any chronic disease which produces marasmus. Relative or partial atrophy is exhibited by a more or less progressive diminution of the thickness of the wall, even when there is also an increase of the longitudinal and transverse diameters with dilatation of the cavities.

This thinning or relaxation of the walls of the heart may exist in a heart otherwise normal, and be due to an overstrain or to some accidental affection of the circulatory system, or, above all, to valvular lesions. When a valvular lesion has been formed, the intra-cardiac pressure acquires gradually so much power, as a consequence of the incomplete emptying of the ventricle, that a relaxation of the walls of the heart is produced, with dilatation of the cavities. The thinning of the walls is due to natural causes, and the limitation of such a condition is obtained by progressive increase of the muscular substance of the ventricle. If this compensating hypertrophy is incompletely developed, there

follows in addition to symptoms of dilatation of the heart, the phenomena of a relative diminution of the muscular substance, of cardiac insufficiency, and the indication of dietetico-mechanical treatment becomes well marked. A decided increase in the size of the cavities of the heart should be considered as compensatory, as it makes room for the quantity of blood which regurgitates by imperfect closure of the valves; it needs no treatment. On the other hand dilatation, the result of exaggerated relaxation, may recover itself, and does so when the muscle gains strength.

The qualitative changes in the heart are either inflammatory attacks, disorders of nutrition, or degenerative processes, which are the result of a variety of local diseases, more rarely of constitutional diseases. The muscular fibre is then diseased, and is unable, or at least less able, to fulfil its functions. When by over-nutrition the heart is surrounded by and infiltrated with fat, the muscular fibre may not only be atrophied but even become subject itself to fatty degeneration. The fatty heart is frequently met with in the statistics of chronic diseases of the heart. Fatty degeneration of the fibre is a serious matter as regards treatment. It is most often the result of chronic nutritive troubles, however caused, but particularly when caused by sclerosis of the coronary arteries. A certain number of serious changes are not amenable to treatment; such are hæmorrhagic extravasation, softening, etc. There yet remains to notice a modification of the tissue of the heart, which is very difficult to diagnose during life. It is the exchange of muscular fibre for connective tissue, as a result of endocarditis or pericarditis. Diseases of the muscle, which are due to infectious diseases with embolo-septic changes, or to general syphilis, are not amenable to treatment until the initial phenomena have disappeared, leaving only a cardiac weakness. The essence of chronic disease of the heart is the diminution of force and the insufficiency of the muscle, which in the end always produces the same symptoms.

The object of treatment of diseases of the heart should be to remedy the muscular insufficiency, to give to the heart needful tone, to diminish its volume to that of compensating hypertrophy, which will permit, by reinforcing contractile power, a diminution of any existing dilatation; in the next place to neutralise the changes in the circulatory apparatus by the diseased state of the cardiac muscle, changes in the quality of the blood as well as in the manner of its distribution. The prognosis of the results which should accompany treatment is decided chiefly by the nature and intensity of the disordered nutrition, and by the complications which may be met with. The more simple these conditions the more successful the treatment; on the contrary, the prognosis becomes unfavourable in proportion to the imperfection of nutrition and the accentuation of secondary changes in other organs.

In 1875 Certé attempted to act directly on the cardiac muscle which had become insufficient, and to regain the lost compensation power. The first experiment made on man established the theory. The treatment remedies disordered, exaggerated, insufficient, or changed nutrition. Then follows an improvement in the state of the blood, a diminution of the excess of water, an alleviation of the heart's work, the reinforcement of the muscle by an increase of its bulk, the raising of blood-pressure in the aortic system, increased activity of the kidney, and lastly, the restoration to the heart of its power. All these advantages are derived from gymnastic exercises, and especially by the

movement of ascension. Cœrtel's method of treatment consists (1) of diet, and (2) of mechanical gymnastics, the one being the complement of the other; and it is seldom that there are indications for the employment of either form of treatment alone. The use of the dietetic method is regulated on the one hand by the state of nutrition and of embonpoint, on the other by the quantity of fluid accumulated in the vessels and tissues. On the subject of embonpoint the following variations must be noticed:

1. Enormous embonpoint with plethora, and a commencing diminution of the force of the heart. The *regimen* comprises increase of albuminoids, diminution of lipogena, little or no diminution of the ingestion of liquids.

2. Embonpoint with serous plethora, necessitating an increase of albuminous elements and diminution of fats and liquids.

3. Embonpoint in the aged, with hydræmia, and diminution at the same time of albumen and fat. In such cases the albuminoids must be increased, and fats and hydrocarbons must be given freely or even increased at the same time that liquids are diminished.

The dietetic method is also useful in those cases where there is inanition and debility accompanying diminished force of the heart and hydræmia. In these cases it is again necessary to increase the albuminoid constituents of the heart, and to bring about hypertrophy. It is necessary to consider now, not only those forms of disease which result from impaired nutrition, but also those conditions in which the heart, unable to overcome obstructed circulation, lengthens and dilates. In order to procure the hypertrophy of a muscle, the mere increase of albuminoids will not suffice: its functional activity must also be increased. Hypertrophy of the heart may also be produced by external influences which favour its nutrition. To new demands on its energy correspond an increase in the quantity of nutritive materials, the transformation of circulating albumen into organic albumen and the formation of new muscular fibres. In the great majority of the disorders of compensation, of cases of insufficiency resulting from errors of nutrition, the auto-regulation is unable to supply sufficient cardiac force for any lengthened period. It often happens that a rapid and spontaneous improvement in the disordered circulation takes place, but more pronounced symptoms will return, and after a certain number of fluctuations death occurs. The increase in the functional activity of the heart, thanks to which an improvement in its nutrition becomes possible, depends on an augmentation of its contractions, and is obtained by mechanical gymnastics. Every muscular contraction which leads to circulatory changes reacts upon the heart. Normally the majority of muscular contractions do not produce any appreciable results, but a diseased or enfeebled heart reacts the more sensitively in proportion to its diminished force. It is movements of walking and ascension which have the most influence on the cardiac muscle. Excitation of the heart, especially by general movement of the body and the ascent of mountains, bring about in the end its hypertrophy. Dr. Bergmann has compared the weight of human hearts, and of the hearts of domestic and wild animals, which indulge in prolonged and vigorous movements, to the weights of their respective bodies. The figures he has obtained clearly demonstrate the influence of muscular action. The phenomena which, during a prolonged ascent, ought to produce an exaggerated

nutrition of the heart and the formation of new muscle, are as follows:

1. A long continued dilatation of the arteries which augments the conveyance of materials.

2. A production of more vigorous contractions, and an increase in the work of the heart, whence the introduction and changes of albumen.

The work caused by muscular action is very varied, according to the length of the walk and the degree of ascension. The heart may be acted upon with a due regard to its power, and in the most carefully graduated manner. The fertilisation of land is based upon a like principle. As roads are chosen of a known gradient, and are sub-divided by uniform measurement, it is possible to lay down for each patient an exactly calculated task. The lazy patient, who dislikes to be disturbed, must do the necessary work, whilst the too energetic one must be restrained. Dr. A. Schott, of Manheim, has employed in the treatment of chronic heart disease so-called medical gymnastics, combined with baths, and different kinds of motion, active and passive. Motor impulses may be made to react upon the heart by the execution of regulated muscular movements, or by triumphing over a definite resistance, by the action of a group of muscles, thus making a therapeutic use of the cardiac excitation which results. Movements of walking and ascension may be protracted several times a day, from a few minutes to two hours or more. Gymnastic excitation is limited to a few groups of muscles, and to brief periods.

The second object of mechanical treatment is to do away with irregularities of circulation by the raising of blood-pressure in the aortic system, by more complete filling of the arteries, and diminution of the mass of blood which stagnates in the veins. Walking and ascension produce in this direction the happiest results, the power increasing with the activity of the heart. As by muscular activity more blood is returned to the great venous trunks, and expelled from the overcharged venous extremities—so more blood is supplied to the right side of the heart than would be the case in other conditions, and above all, in repose.

As soon as increased activity of the heart has continued for some time, and blood-pressure has been raised in the arterial system, a compensating dilatation of the arteries and a diminished tension of their walls and tonicity takes place. The flow of blood to the left side of the heart is eased; the quantity of arterial blood is increased; that of venous blood is diminished. In the restoration of equilibrium between the arterial and venous systems a part of the blood returns to the lungs; there is deep inspiration, with expansion of the thorax; there is an enlarged pulmonary surface and dilatation of the pulmonary vessels. Ascension movements can alone produce such easy respiration for hours. There is more rapid flow through the lungs, and more blood returned to the left heart. A sufficient action can be obtained by imitating ascension by similar movements on the same spot, the legs being alternately raised whilst the patient makes deep inspirations. It must be understood that it is almost impossible to continue deep inspirations at will, whilst anatomically executing movements of ascension for several hours. Resisting movements with muscular groups of the lower extremities answer at best to the raising of the weight of the body in mounting stairs, whilst the torsions and flexions of the trunk exercise their action preferably on the circulation in the abdominal vessels, and thereby occasion

indirectly an increase in the amount of blood returned from the lower extremities. One favourable condition too often omitted is a deeper respiration. With the indication of raising little by little the force of the heart must be considered that of lessening, if possible, its work. Wunderlich has already thought of proportioning the amount of blood to be moved to the strength of the heart, but he resorted to bleeding, which is a bad method. Cœtel obtains the unloading of the circulation: (1) By diminution of liquids in food and drink, by the limitation of beverages, the quantity being strictly measured. The diminution must not be too great, or it will lessen the secretion of urine. (2) By an increase of the excretion of liquids from the body, chiefly by the skin and the kidneys. An increased excretion from the skin, leaving out of the question pharmaceutical means, can be obtained by increased muscular activity, by walking, ascending, and gymnastic exercises. Sweat may also be produced by heat, solar heat, or by sand baths. An increased evaporation from the surface of the lungs also follows gymnastic exercises and ascending movements.

An increased secretion of urine happens even with a diminished supply of liquid nourishment, in all cases in which the heart retains sufficient force, and there is œdema, venous stases, etc., provided the kidneys are equal to their work. The increased activity of the heart consequent upon movements of ascension, and the diminished general and renal stasis occurring simultaneously, increases the flow of urine. Cœtel has several times observed, after profuse perspiration during a walk in summer, more urine had been excreted than liquid had been imbibed. A certain number of circumstances render the employment of the method impossible or contra-indicate it. Secondary compensating hypertrophy and compensating dilatation are not conditions to be remedied; the aim of therapeutics is to maintain them. Sclerosis of the vessels, myoma, and aneurism of the heart, do not suggest this treatment. The employment of the method will demand the greatest prudence, when the symptoms are so grave that deep lesions of the muscular tissue are suspected. In such cases, baths and motor-excitations must be abandoned. Endocarditis of a chronic form, or with frequent relapses, debility of the cardiac muscle, insufficient compensation of a valvular lesion after recent endocarditis, stenosis of the orifices, the formation of a patch of induration, aneurisms of the heart which can be diagnosed, adhesions between the heart and its pericardium, a general atheromatous condition, a chronic disease of the kidney, associated with old valvular lesions, and chronic Bright's disease, are all pathological conditions which counter-indicate or greatly limit dietetico-mechanical treatment. With all patients a slow beginning is required, by experimental and prudent attempts. According to the manner in which the patient bears mechanical treatment may be successively tried walking on level ground, gardening, mounting hills, mounting stairs, gymnastic exercises, active movements of opposition to the circulatory machine. It will not be difficult to determine the exact degree of exercise which will prove beneficial, or to learn that the method is inappropriate.

In conclusion: (1) Favourable results are obtained by gardening in advanced stages of hypertrophy, without appreciable symptoms of sclerosis of coronary arteries, when patients are already aged, with serous plethora, venous stasis, and often œdema. These results comprise increase and re-establishment of the force of the heart, regulations of its movements when they have become irregular or intermittent,

increased amount of albumen, and often considerable reduction of corpulence, and generally increased activity of the body. (2) The end obtained is the increase of the muscular substance of the heart, and the development of a compensating hypertrophy when not as yet completely formed, or when it is debilitated by valvular lesions and the restriction of the pulmonary circulation in the diseases of the vertebral column. (3) The method also combats extensive retro-dilatations, so far as they are not compensating to a lowering of the force of the muscle, and to an elevation of intra-cardiac pressure, in persons who are still young, and in valvular lesions which are not of long standing, especially in mitral insufficiency. It affords the most complete equilibrium between the arterial and venous systems, the increase in the quantity of blood and of the blood-pressure in the aortic system, the diminution of cyanosis and of œdema, and the diminution or complete removal of respiratory complications, more particularly of dyspnoea.

NOTES ON AFRICAN FEVER.

By ROBERT REILLY, L.R.C.S.I.,

SURGEON AFRICAN ROYAL MAIL STEAMSHIP COMPANY.

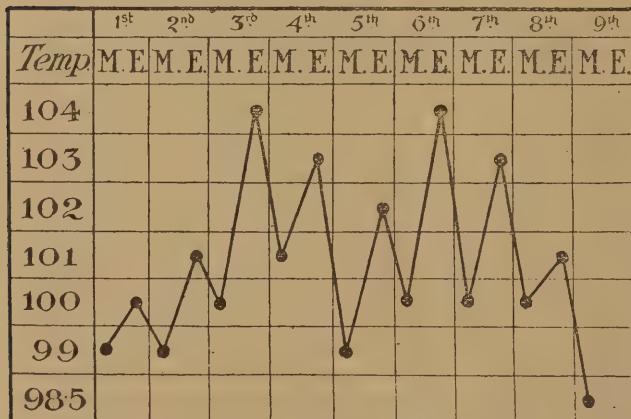
As some of even our highest authorities have not yet made up their minds as to the precise nature of certain African fevers, I may be allowed to make a few remarks thereon. I was reading lately a very interesting book by Professor Drummond, F.R.G.S., entitled "Tropical Africa," wherein the distinguished author observes that "the only scientific test" at present for African fever "is a human life;" and an "awful chain of graves stretching across Africa" the testimony of its ravages. We might easily construe these remarks of the professor into a reproach, but knowing his great scientific attainments, zeal for truth, and human welfare, we see they tend far otherwise; and yet, even as a reproach, we might receive them with a certain humbleness. As they stand, however, they call for much consideration. Murchison at first regarded African but another form of yellow fever, and subsequently designated it as a kind of relapsing fever; while others regarded it as contagious and identical with the Egyptian "biloses typhoid" described by Griesinger. Surgeon-major Lyons, of the Bengal army, in a letter to the *Lancet* some years ago, relates the following incident:—"It is said that outside the mouth of the Bonny river is an old coal hunk, whence all the ships obtain their supplies of all kinds, especially their coal. It is said that coal, notably, and other materials partially, under the constant rain and heat of that station, become hot-beds of fever. It is noticed that all who go on board the hulk to get stores fall victims; all vessels which be off her get infected." Of course times have since changed in Bonny, as well as other places; but a theory for the contagiousness of the fever still remains. Furthermore, Tardieu, of Paris, advanced a cause of the fever, that "certaines plantes aquatiques paraîtraient par leur émanations naturelles et sans se décomposer; avoir la puissance d'endanger la fièvre" (*Clinique Médicale*, p. 45). It is also more prevalent during the north wind. If the regions it inhabits were mapped out, it is probable that this disease would be found to follow a definite geographical line. Natives and Europeans are subject to it alike, "more particularly in changing from district to district and from altitude to altitude. Thus, in marching over the Tanganyiska plateau, four or five of my native carriers were down with the fever, although their homes

were only two or three hundred miles off, before I had even a touch of it" (see Drummond's "Tropical Africa").

The other chief characteristics of African fever may be mentioned, viz., a *constant* high temperature, intense bilious vomiting, and partial suppression of urine, which latter is very dark or mahogany coloured. Pneumonia is also a not infrequent complication, which many regard as a favourable symptom, as it helps to counteract the tendency to cerebral complications which often arise and prove very fatal.

As regards treatment, quinine should not be looked to as the great and almost the sole remedy, as some would have us think. In the first place, quinine as a prophylactic has been proven ineffectual. Dr. Livingstone found that "the believers and unbelievers in quinine suffered equally from fever, and the use of quinine as a prophylactic was finally abandoned;" and he further adds, "The best preventive against fever is plenty of interesting work to do, and abundance of wholesome food to eat. A man well housed and clothed will not find it a more formidable enemy than a common cold." In all reverence to the memory of the great traveller and philanthropist, be it said, that his latter assertion is untenable; and, furthermore, people in the "Libyan wilds" have not always an opportunity of being either well housed or clothed. The system is apt to become, as it were, deadened to the effects of quinine, if that drug be persistently used as a prophylactic; and thus, when it is really required, it is worse than useless. I have seen those who were in the habit of using the bark as a preventive, suffer far more from an attack of this fever than those who had hitherto been unaccustomed to use quinine in any form. As another instance of the inefficacy of quinine, let me cite the following. I was asked to visit a vessel lying off the mouth of one of the African rivers, as nearly all hands, including the doctor and officers, were down with the typical fever. On that occasion the doctor himself told me that in every case the quinine treatment failed, and he was relying on other remedies. He was also puzzled at the unusual irregularity of the temperatures, always much above normal but never following any definite course. If space permitted, I might produce from my note-book the exact temperatures, recorded from day to day, of fever cases in Africa, which were almost similar to those made by the gentleman to whom I have just alluded.

TEMPERATURES IN A TYPICAL CASE OF AFRICAN
"BLACK-WATER" FEVER. July, 1888.



The temperature in this case remained about normal after the ninth day. A relapse set in fourteen days after

complete convalescence, and the temperature followed a similar course.

The following treatment has been employed with good results in cases of African fever, particularly the "black-water" variety. At the onset a good purge, such as colocynth and blue pill, and a mixture containing liq. ammon. acet. ʒ ii., spt. æther nit. ʒ j., tinct. hyoscyam. ʒ vi., camph. ad. ʒ viii.; ʒ f. every three or four hours. The latter used to be a favourite prescription of the late Dr. Lyons, of Dublin, who said, "With a hot and dry skin, a consequent restless excitement on the part of the patient, relief will be given perhaps most readily by acting on the skin and inducing a general moderate and continuous sweat." Salol or salicylate of phenol I tried with good effect in a few cases, in gr. 10-20 as doses every two hours. It may be administered in tabloids, and is perfectly tasteless. If it is a fact that certain bacteriæ (as yet not fully described) exist in the blood of patients during an attack of this type of fever, salol may prove very useful. I found salol invaluable when many other well-known remedies failed. Lime juice lotion applied will relieve headache; and if there be much reaching or *anxiété épigastrique*, an effervescing sedative draught will be called for. Thirst may be relieved with soda or kali water; and barley water, for many reasons, is an excellent drink in these fevers.

The dietary, however, is even more important. It should be essentially light and nourishing, and taken in small quantities at regular intervals. Of course these are old-world truths, perhaps, but they are often not rigidly followed. Some patients will do well with arrowroot and a little port wine (the wine mixed with the arrowroot), or calves'-foot jelly made with brandy or champagne. Others prefer chicken broth (strained of the fat), or light puddings. Such dietary seems to bring the best results. It may be here suggested that cocoa might be substituted with advantage for the coffee generally taken by travellers in the early morning just after awakening. Coffee taken at that time very often produces a sickening sensation about the stomach, which frequently continues through the day, and which cocoa seldom causes.

When convalescence has set in, quinine may then be given with much advantage; and in anæmic patients, particularly females, some light preparation of iron, such as the ammonio-citrate, with a little liquor strychniæ, may also be given with benefit. Richardson's pearl-coated pills are very handy, as the various medicines usually required can be obtained in that form, and will stand the test of any climate.

As these notes were for the most part jotted down during the hurry of travel, they do not pretend to any definite order of coherency; and if they contain nothing very novel, we can only plead our excuse in the old Greek saying—

"Δις ἡ τὸς τὰ καλά.

P.S.—When the above notes were being written, I forgot to include in its proper place the following passage from Dr. Lyons' lecture on "Remittent Fevers." "From my experience of this medicine (quinine) as administered in the epidemic we are now speaking of, I am far from being disposed to regard it as a drug upon which any reliance can be placed when exhibited during the course of the disease. The indications for its use as an anti-periodic are not very clearly manifested, and its tonic action is too slow in a class of cases in which prompt support to the system and immediate stimulation are often urgently called for."

THE GENERAL PRACTICAL USES OF ELECTRICITY IN MEDICINE AND SURGERY.

By W. E. STEAVENSON, M.D., (CANTAB.), M.R.C.P.,

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(Continued from page 398).

ONE of the most frequent applications of electricity to surgery is in the treatment of nævi. Nævi are treated in many different ways, such as subcutaneous ligature, setons, injection of perchloride of iron, caustics, the actual cautery, excision, and electrolysis. Nearly every surgeon has his own method which he prefers, but the employment of electrolysis is becoming more and more prevalent. In some situations no doubt electrolysis gives the best results, especially where it is desirable that the subsequent scarring shall be as little noticeable as possible, but it also possesses certain other advantages over most of the modes of treatment. Except in very vascular nævi, electrolysis can be performed without causing bleeding. The action of the current can be better and more easily localised than that of acids or caustic alkalies, because the action ceases directly the current is broken, and no caustic material is left behind to consume the tissues until it is neutralised. The cauterisation produced by electrolysis is only proportionate to the strength of the current, and is in consequence of the current. Twenty-three parts of nascent sodium are produced at the negative pole for every sixty-five parts of zinc consumed in the battery; and sixteen parts of oxygen are produced at the positive pole. The sodium at once forming caustic soda at the negative pole, which combines with the tissues, and hydrogen is liberated. The oxygen oxydises an amount of tissue in proportion to the quantity that is disengaged, therefore the caustic effects of the battery can be limited at will, which is not the case with more or less fluid chemical caustics. Electrolysis is not so prone to cause constitutional disturbance as the seton and ligature, and it is less painful, the pain ceasing immediately the current is broken. This is a most remarkable fact, and is no doubt due to the destruction of the ends of the nerves, which is not the case when a nævus is excised. This freedom from after pain would alone recommend the operation by electrolysis to mothers who have to nurse the children afterwards; and as a rule less scarring is left after the use of electricity than after any other method, but the treatment by electrolysis is more tedious, requires more skill, and is more expensive to the operator; therefore in parts where a scar is of very little importance, ablation may be performed, and it is much more expeditious and less troublesome to the surgeon, though causing more after pain to the patient.

Nævi may be divided into three classes:—Cutaneous, subcutaneous, and mixed. Some will remain stationary and may disappear spontaneously, while others have a tendency to grow. John Duncan, of Edinburgh, recommends that nævi the size of a pin's head on the face should be destroyed, as they are very persistent, and will sometimes grow. When small they can be removed with the least appreciable amount of pain, and in about the space of half a minute, leaving no mark. Those larger nævi, which persist after puberty, are not likely to disappear spontaneously. Every growing nævus should be attacked at once, as the difficulty of dealing with them increases with their size. It is only possible to destroy nævi by galvano-cautery or electrolysis without leaving

a scar when they are entirely subcutaneous. When this is the case the nævoid tissue can be coagulated, and gradually absorbed and obliterated without injury to the superficial skin. Subcutaneous nævi of the cheek or lips, and in other favourable situations, can be attacked through the mucous membrane from the inside. Nævi of the mixed variety, cutaneous nævi, and port-wine stains cannot be removed without leaving some scar, for the discoloured and diseased skin has to be destroyed.

Needles may be made of steel, platinum, or gold, but it must be remembered that when attached to the positive pole the metal itself is also decomposed. This may be an advantage in very vascular nævi if steel needles are used, for a chloride of iron is formed which assists in the coagulating process. Gold needles used under these circumstances only become permanently discoloured, it is best, therefore, to reserve them for use with the negative pole. Platinum of all metals is the least affected by electricity, and needles made of this metal are therefore most usually employed. The action of the current appears to extend for a greater distance around platinum needles, and they do not become so tightly fixed in the tissues as the steel needles



FIG. 1.

do. Steel takes the best point, and the needles made of this metal are very frequently spear-shaped (FIG. 1). The

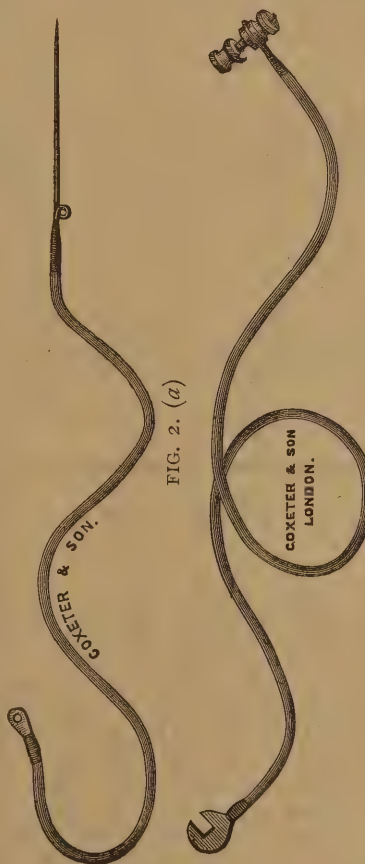


FIG. 2. (a)

FIG. 2. (b)

trocar pointed needle is the easiest to insert, and is usually the shape in which the gold needles are made. Of all three metals platinum takes the worst point, and these needles are usually made with a sharp rounded point, like a pin. (FIG. 2.)

Dr. Althaus has suggested the use of several fine gilt needles fixed together like the prongs of a fork (FIG. 3), and these are sometimes employed; but most frequently separate needles are used. If more than one are used with either pole, they are attached to it by a *serres-fines* conductor (FIGS. 11, 13, etc.), which is a rheophore containing several strands of wire, united at the battery end, but divided usually into six tails at the other end to which the needles

are attached by small clamps or wire holders (FIGS. 4 and 5). The needles are bare at the end connected to the rheophore,

but insulated in their stems up to within a variable distance of their points. When a nævus has to be treated, needles are chosen with uninsulated points of a length to correspond

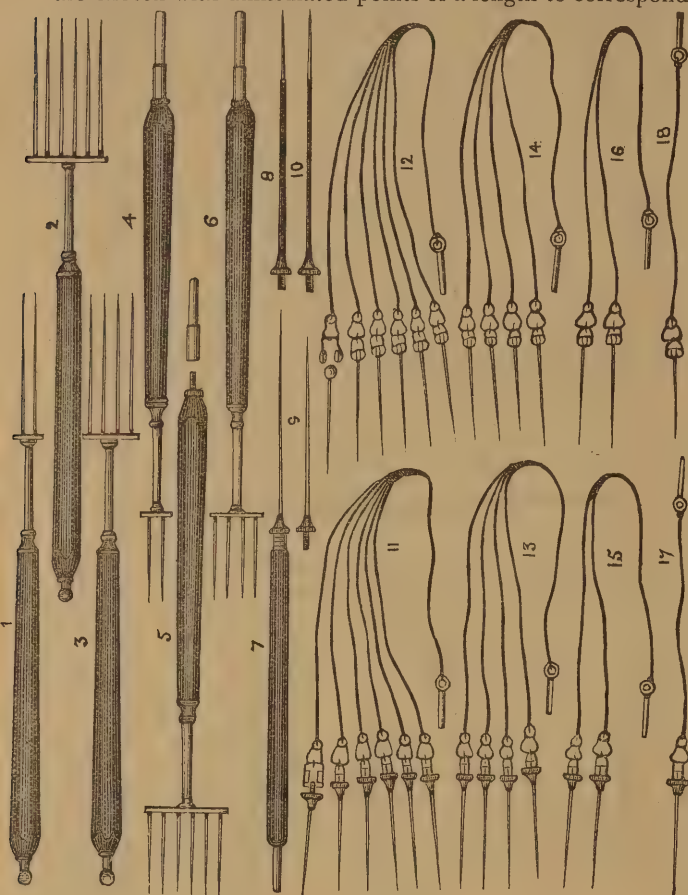


FIG. 3.

with its size. The uninsulated ends must be completely buried in the nævus, especially with the subcutaneous variety, otherwise the skin will be destroyed around the point of entrance of each needle. Different materials are used for insulation, such as shellac, gum elastic, and vulcanite. An



FIG. 4.

operator can coat his own needles with shellac, but it very quickly comes off. The number of needles to be used, and the pole to which they should be attached, depends upon the size and situation of the nævus. As a rule, platinum needles should be used with the positive pole, except in the case of very vascular nævi before alluded to; but it does not matter of what material the needles are made of when used with the negative pole; gold needles are often employed to distinguish them from those which have been made positive. If the nævus is situated on a conspicuous part of the body, such as the face, where the smallest possible amount of scarring is desirable, it is best to use platinum needles attached only to the positive pole. A moistened sponge or carbon electrode covered with chamois leather, or

a moistened pad, attached to the negative pole, is applied to some indifferent part of the body, such as the back, arm, or leg, and a current is passed of about seventy milliamperes for the space of ten minutes. At about the end of five minutes, if the needles have not been inserted very deeply, the tissues around them become blackened, and the needles may be moved and pushed into another part of the growth. It is often possible to use the same place of entrance by pushing the needle in another direction. This is often desirable, as it is sometimes impossible to prevent some mark remaining at the point of entrance of the needles. When large mixed nævi are to be treated on parts of the body where scarring is not of so much consequence, needles may be used attached to the negative or both poles. The action is then very greatly increased in rapidity. A current strength of 100 milliamperes may be used, and the position of the needles frequently changed. A small nævus may be destroyed with needles attached to both poles in two, three, or five minutes, according to its size. If the current strength is increased to 200 milliamperes, great heat is evolved from the rapid chemical decomposition that takes place, and if the negative needles be kept too long in the same spot a slough is produced. The effects are not due to the development of heat, but to chemical decomposition. If the needles are moved at the proper time a dry blackened surface is present where the positive needles have been used, and an emphysematous discoloured swelling at the negative needles, with the surrounding skin greatly congested. If a needle slips out some bleeding may sometimes occur. This may usually be arrested by increasing the strength of the current; the negative pole appears to be as efficacious for this purpose as the positive. The growth of a nævus may often be more thoroughly arrested by passing the needles into some of the larger vessels or blood spaces, but of course the liability to hæmorrhages is increased. A small compress of lint may be placed over the point of the needle as it is withdrawn, and kept pressed to the point by another compress and bandage, until all likelihood of bleeding has ceased. The circulation through a nævus is often thus materially obstructed and its vitality impaired. Needles attached to the positive pole sometimes stick, and are with difficulty removed, so that on withdrawal bleeding takes place, but if the needles are previously loosened by twisting them round, and then quietly and slowly removed, this chance of hæmorrhage is reduced unless the tumour is very vascular.

The electrolysis of a nævus should be stopped when every bright red or morbid part has changed colour. It may be that some few vessels escape destruction, and after the greater part of the destroyed surface has healed these veins may re-commence growing, and require another operation. No untoward circumstances as a rule accompany the electrolysis of nævi, except perhaps the destruction of more tissue than is necessary by the current being used too strong or for too long a time. It is very difficult to estimate the amount of action necessary, so that the blood in the vessels may be obstructed, and the viability of the nævus destroyed, and that the whole mass may not slough. It is wonderful how nature will repair parts that appear to have been thoroughly destroyed. Often, if the first scab is knocked off too soon, a deep excavated sore will soon be seen, which sometimes greatly alarms the child's parents. I have seen the scalp destroyed to the bone over an area the size of a sixpence, and yet for it to fill up and skin over, so that a very small visible scar was left. The whole septum

FIG. 5.

or tip of the nose has appeared sometimes to be destroyed, but nature has replaced them accurately. The tip of the nose is a very common place for a nævus to occur, and it is difficult to treat. It is better to do too little than too much. The operation can be repeated, but a part may be destroyed beyond repair. Often, after part of a nævus has been destroyed, other vessels which have escaped may become strangled and obliterated by the contraction which takes place during the process of healing.

An anæsthetic is necessary for a nævus of any size, for the operation while it lasts is acutely painful and is sometimes prolonged for eight or ten minutes. Alarming pallor may occur during the electrolysis of nævi on the head. This is much aggravated when the child is under the influence of chloroform. Therefore, the current has to be put on very gradually. This collapse and faintness is produced directly the circuit is completed, and is possibly due to the patient not being sufficiently under the influence of the anæsthetic, and therefore suffers from shock; but I should not advocate, in view of this theory being probably correct, that a patient should be profoundly anæsthetised, for if the current still produced its characteristic effect under these circumstances, the result might be fatal. It is best to increase the strength of the current gradually, and at the same time, as prudence dictates, to push the anæsthetic. The younger the infant the more grave the symptoms. The pulse can be felt immediately as influenced, and sometimes becomes almost imperceptible. The breath, which before the circuit is closed was normal, becomes crowing and shallow, showing that the pneumo-gastric, and especially its recurrent laryngeal branch, is profoundly affected. A very favourite place for nævi is at the vertex, just over the anterior fontanelle. The current is therefore passed direct through the brain, when a nævus is in that situation, and it is also essential not to get suppuration, on account of the underlying meninges; therefore, it is always preferable to use needles attached only to the positive pole. This greatly prolongs the operation, and often necessitates a second, and even a third application of the electricity. This again increases the risk. A nævus, therefore, over the anterior fontanelle is not treated by electrolysis without risk. This is also the case with any other form of treatment that may be adopted.

With large nævi the operation by electrolysis is extremely tedious and troublesome, but with perseverance and patience the largest and worst may in time be cured, with more or less resulting scar, according to the skill of the operator. For some pendulous nævi, or for certain parts of nævi, galvano-cautery is sometimes preferable to electrolysis. The number of times it is necessary to operate depends upon the size of the nævus, and the effect produced by each operation. A month or six weeks may intervene between one application of the current and the next, except in the case of very large nævi, in which a distant part may be attacked after the lapse of a fortnight, so as to let the part first operated upon continue the process of healing undisturbed. Port wine stains and superficial moles can also be treated by destroying a small portion of them at a time, when the mark is not small enough for the whole to be attacked at one sitting. Some port wine stains have little nodular excrescences upon them which can be previously removed by the galvano-cautery. I have thus removed two of three little prominent points on a port wine stain at the same sitting. When healed, these spots are covered by small islets of healthy skin. For the flat part of the port wine stain or mole I use electrodes suggested to me by Mr. R. W. Parker, Surgeon to the

Grosvenor Hospital for Women and Children. They consist of metal plates of various sizes, covered with platinum foil.



FIG. 6.

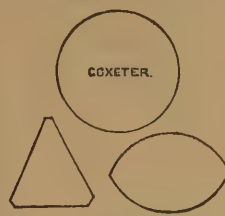


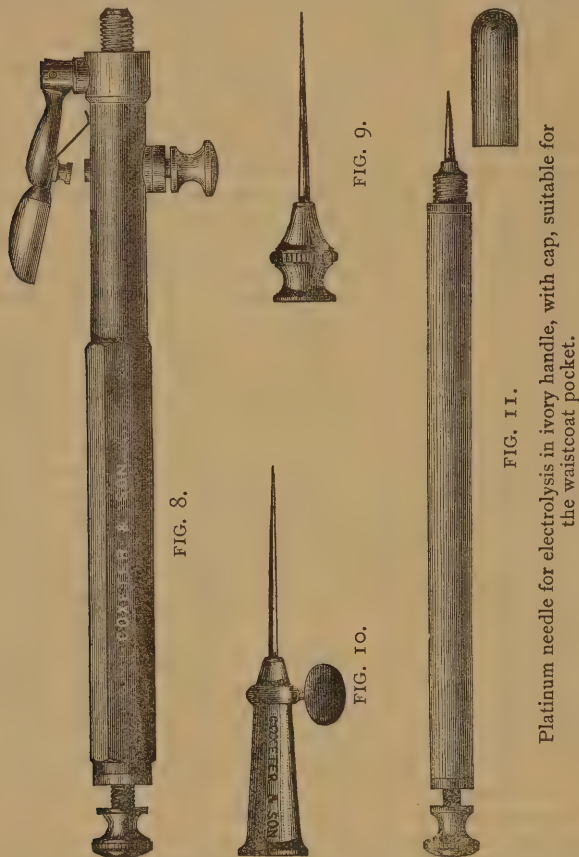
FIG. 7.

to the opposite pole being placed on some indifferent part of the body. The surface of the port wine stain beneath the metal plate is moistened with salt water, and a current of about forty to fifty milliamperes allowed to pass until the skin is destroyed to a sufficient depth. The patient must be under chloroform. A frothy, slimy *débris* soon collects under the metal plate, and if attention is not paid to the electrode, it is likely to slip off the part being operated upon, and more or less destroy neighbouring skin. The part of the stain that has been destroyed subsequently becomes a dry scab, and comes off, leaving beneath it a layer of more or less healthy skin. The process can then be repeated, usually after an interval of two or three weeks, on a fresh part of the stain. I have treated hairy moles in this way, and when the skin has been destroyed to the depth of the follicles from which the hairs grow, all the hairs will come out with the greatest ease. If, after the scab has separated, a few hairs still remain, they can be removed by the process about to be described.

The removal of superfluous hair from the face, and sometimes from other parts, or of little hairy warts, and other disfiguring marks, is often of the greatest importance to ladies. Many are the nostrums that have been sold for the purpose of effecting this desirable object, and much time has been fruitlessly wasted, sometimes every day, in removing by the tweezers these obstinate and ever-returning hairs; each time they grow again stiffer and longer than before. The only effectual way of permanently removing these hairs and marks is by electrolysis.¹ It is best that the patient should be lying down in a good light. A pad soaked in salt water, and connected with the positive pole of a battery, is placed beneath the collar. Each hair as it is to be extracted is seized by a depilatory forceps, and a needle usually made of platinum (FIG. 9), mounted on a suitable handle, is thrust down in the follicle beside the hair, as far as the papilla from which the hair grows. The depth of the follicle depends upon the hair, and is deeper for large hairs than for small ones. It will be found generally necessary to insert the needle from one-sixteenth to an eighth of an inch. The circuit is then closed; this can best be done by an arrangement on the handle holding the needle (FIG. 8), and a current of about five milliamperes is passed for twenty or thirty seconds. The hair all the time is held just tight by the forceps. When the papilla is dissolved away, the hair will slowly slip out without any extra force being used. The exact time occupied by the process depends upon whether the needle is close to the papilla or not. During the time the current is passing, a small amount of froth is seen to rise up by the side of the hair. A slight bump, like a flea-bite, remains at the spot from which the hair has been

¹Vide *British Medical Journal*, November 14th, 1885, p. 943.

removed for about two hours, and sometimes a little speck will remain for a week or ten days; this then falls off, and no mark remains. It is best only to remove the longest and darkest hairs, and those chosen should not be too close together. About twenty or thirty hairs are sufficient to remove from a lady's face at each sitting. The operation



may be repeated at the end of every ten days or a fortnight until all the hairs have been removed that cause disfigurement. The number of times that it is necessary to perform the operation depends upon the abundance of the growth. A small hairy tuft or mole, having a dozen or sixteen hairs, can be removed at one sitting. No anæsthetic is required, as the process is not a very painful one. A slight twinge is experienced at the removal of each hair, such as would be caused by a spark from the fire alighting on the skin. With the greatest amount of care it will be found that one or two hairs escape total destruction, and may return; but these can be removed on a subsequent occasion. It is said that the sensitiveness of the skin may be reduced by painting it over with a five-per-cent. solution of cocaine. I have never really found this necessary. I have operated on a large number of ladies, and none of them have complained of the pain being more than trifling. It ceases immediately each hair is removed.

The operation is sometimes required in men to remove the hair that occasionally grows on the bridge of the nose, or there may be a bushy growth between the eyebrows, with hairs of such a length as to occasionally get into the line of sight. In-growing eyelashes can also be effectually removed by this method.

SUGGESTIONS FOR THE MORE RATIONAL THERAPEUTICAL TREATMENT OF RESPIRATORY AFFECTIONS.¹

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BEFORE entering upon the direct consideration of my subject, it will, I think, be advantageous to run over, briefly, the chief points in the act of respiration; and more particularly to examine the nervous mechanism which originates, regulates, or modifies this complex and somewhat peculiar function. Respiration is a rhythmic action, not merely reflex but something higher, it is automatic; it is the means by which the body, through the contact of the atmospheric air with the blood circulating in the pulmonary capillaries, receives its chief supply of oxygen, and parts with a very large proportion of carbonic acid. For my present purpose it will be unnecessary to enter into further detail respecting it. Respiration is presided over by a special nervous supply, composed of a respiratory centre, in connection with which we have nerve fibres, both accelerating and inhibitory; it is, besides, under the control of the will to a limited extent, and is greatly influenced by the emotions; it is involuntary, persisting during unconsciousness. This respiratory centre, the "neud vital" of Flourens, is placed in the medulla below the vaso-motor centre; and its independency is proved by the fact that breathing persists after all parts of the brain above the medulla are removed, and even if the spinal cord be divided just below the medulla, thoracic movements necessarily cease, but the persisting movements of the nostrils and glottis prove the centre still to be in action; on the other hand, if this "neud vital" be excised, all other portions of the nervous system being untouched, respiration ceases.

Scientific opinion points to this respiratory centre as the origin of the action of breathing, not the peripheral termination of the vagi in the lungs, consequently its automatic over its reflex action is manifest. What then are the means by which this centre governs the act of breathing? The rhythmical discharge of nervous force is dependent upon the blood circulating through it. Natural breathing is the result of the circulation of blood containing a certain amount of oxygen and carbonic acid; deficiency of oxygen or excess of carbonic acid interferes with this natural rhythm. Venous blood (containing as it does less oxygen, and an excess of carbonic acid compared with arterial blood) increases the respiratory impulses and quickens their rhythm; and while, as we know, in normal breathing, expiration is effected without the intervention of muscular action by the elasticity and weight of the thorax and lungs alone; in deep breathing or laboured respiration, the expiratory action is increased by a greater or less number of muscles being involved, depending upon its intensity. It seems to be the prevailing opinion that it is rather the deficiency of oxygen than the excess of

¹[To the writings of the late Dr. Milner Fothergill, whose recent decease the profession still mourns, I must express my great indebtedness, not only for suggesting the line of thought I have endeavoured to follow in this paper; but also, as the readers of his works will observe, by the numerous quotations, for the actual words in which to express my meaning. I take the opportunity, therefore, at this stage to fully acknowledge this assistance in a general way, and thus avoid a repetition of references. For further information I would suggest a careful perusal of the following works of Dr. Milner Fothergill: "The Antagonism of Therapeutic Agents," "Chronic Bronchitis," "Handbook of Treatment," "The Physiological Factor in Diagnosis," and "Gout in its Protean Aspects."]

carbonic acid which excites the more energetic respiration, since the effect of ligature of the carotids is to produce dyspnœa. An animal, in which artificial respiration has been energetically carried on, ceases to breathe for some time until the blood becomes venous again—this is true physiological apnœa—the excess of oxygen introduced into the blood by the means used, deprives the centre of its irritability, until the amount becoming reduced, its action once more commences (this fact should be borne in mind in cases where artificial respiration is carried on for a lengthened period, as in cases of drowning, chloroform, opium, and other narcotic poisons, and in poisoning by carbonic acid). The blood then must be to a certain extent venous, for the natural performance of the function of the respiratory centre.

The efferent nerves, by means of which nervous force from this centre is transmitted, depend entirely upon the state of the breathing. In ordinary quiet breathing the phrenic, trigemini, intercostals, and the cervical and brachial plexuses are involved, which constitute the nervous supply to the *inspiratory muscles*. As I have already mentioned, under this condition, there is no muscular effort required for *expiration*; but when forced or laboured breathing occurs, we have a state of activity, varying from the employment of the accessory respiratory muscles, to a general convulsive condition which may involve the whole muscular system. In dyspnœa violent respiratory efforts are set up, which involve a greater or less number of muscles according to the severity of the cause inducing it. The more venous the blood, or, more strictly speaking, blood abnormally deficient in oxygen circulating through the respiratory centre, the more energetic are the impulses generated in order to induce respiratory movements powerful enough to oxygenize the blood and restore it to its natural state; so that we must look upon dyspnœa as a regulating act, for, in the majority of cases it leads to an increase in the quantity of oxygen contained in the blood, and then itself ceases. If this is not effected, dyspnœa passes into asphyxia; the struggles to gain its end—the increase of oxygen—are more and more energetic, until either the condition is relieved or the efforts fail; the breathing gradually becoming slower, the enfeebled respiratory centre takes some time to develop an explosion of nervous force; but the impulse when it is generated is proportionally strong. This action is particularly well marked in cases of death from failure of respiration in diseases of these organs, the quick breathing giving way by degrees until we have long inspiratory sighings, with gradually increasing intervals, and finally ceasing altogether.

After this brief *resumé* it will be instructive to examine some of the embarrassments of respiration so often met with, be they functional or connected with some organic lesion. The light thrown upon them by the preceding statement will materially assist us in understanding their production, and what is perhaps more useful, enable us to successfully treat them, or, anticipating their appearance, prevent them becoming manifest.

We will take some of the simpler forms first.

One condition of breathlessness is extremely frequent; it is associated with anæmia, its intensity being proportionate to the condition of the blood. The diminished number of red corpuscles limits the absorption of oxygen, consequently we find the breathing quick and panting, because the blood circulating through the respiratory centre is deficient in oxygen, and the nervous impulses generated in this centre are more frequent in order that, with a fewer

number of oxygen carriers, the more rapid interchange with the air in the lungs may bring about an effect somewhat approaching that of health—a beautiful example of nature's adaptation of means to an end. The red corpuscles being reduced in number must circulate faster in order that sufficient oxygen for the requirements of the system may be introduced. A strong proof of this deficiency of oxygen in anæmic and chlorotic patients is found in their tendency to obesity; they grow fat from lack of blood corpuscles to supply oxygen to burn their hydrocarbons, and the fuel is deposited as fat. As they recover from their anæmia their stoutness diminishes, and they return to their natural symmetry. Exactly similar conditions are found in patients suffering from chronic bronchitis; the limited introduction of oxygen is due to the respiratory embarrassment, and we usually find such patients become stout. In both conditions, chronic bronchitis and anæmia, the feeling of chilliness also points to the absence of oxygen; the oxidising processes being necessarily restricted, less heat is formed.

The breathlessness due to other forms of anæmia, such as is met with in cases of lead, mercury, or copper poisoning, malaria, or other forms of blood poisons, and in the cachectic state induced by malignant disease, may be explained in a similar manner. The lesson to be learned from this is, that, in order to treat the dyspnœa successfully, we must direct our attention to the cause of its production, which, in all cases, is the diminished number of red corpuscles. Iron is therefore indicated as a hæmatic, but in the gouty, syphilitic, malarial, or mercurial dyscrasia, we will not succeed in giving our patients decided or permanent relief until we combat the special dyscrasia, and give potash, mercury, quinine, iodide of potash, etc., in combination with the hæmatic, when we combat the destructive tendency of these several blood poisons, without which the hæmatic properties of iron could not manifest themselves.

In venturing to apply a similar explanation to the dyspnœa met with in pyrexial conditions I am aware that I do not tread upon so secure ground. The action of heat is to stimulate rhythmically-acting centres; for instance, in a case of right-sided cardiac embarrassment, when the heart is labouring to contract upon its contents, the application of large hot poultices to the cardiac region will materially assist its action and enable it to overcome its difficulty. A frog's heart, removed from the body and placed on a plate, soon ceases to contract, but the application of a little heat will rouse the cardiac ganglionic nervous system, and its contractions will again commence; just so in reference to the respiratory centre, if the blood passing through the carotids be heated, the animal experimented upon begins at once to breathe more rapidly, showing that heat stimulates. This may be granted in the case of fever, when the increased temperature of the blood will excite the respiratory action; but other conditions besides increased temperature are in existence; the active tissue disintegration which is going on uses up so much oxygen, the blood is charged with a greater amount of carbonic acid and nitrogenous compounds as the result of this increased metabolism, and the respiratory centre becomes active in proportion to the condition of the blood. The more deficient it is in oxygen the greater the activity, so that independent of, or at least in connection with, the increased temperature of the blood, we have circulating through the respiratory centre, blood containing excess of carbonic acid and other products (which also act as stimu-

lants, as we shall see when speaking of uræmic asthma), and in which the oxygen is diminished owing to the active state of oxidation going on in the tissues.

Here, again, useful lessons may be learned by considering the effects of body heat upon the rhythmically discharging centres of respiration and circulation. If, as we saw a short time ago, chronic bronchitic patients were a chilly race of beings, who feel keenly any depression of the temperature and enjoy the fireside and bright sunlight, do we not see a strong indication for the proper conservance of their bodily heat? These patients are cold, not from increased heat-loss but from deficient heat-production, and the proper clothing of such patients, both by day and night, may perhaps make all the difference between successful and non-successful medical treatment. Walther found that rabbits which had been artificially cooled to a low temperature (48° F.), and kept in a medium not warmer than themselves, had not the power of regaining their normal temperature; but if artificial respiration were resorted to, they did recover their normal temperature: that is, by artificial means chemical interchanges were kept up, and when a certain point had been reached, the automatically acting centres were enabled once more to carry on their functional work efficiently. If it is true that heat stimulates these centres, the converse holds good that cold depresses them, and where the respiration is embarrassed, the organism does not evolve heat as efficiently as it does ordinarily, and the patient is apt to become chilled. This lowering of body temperature causes lessened activity in the centre, and then collapse is apt to come on. How often do we notice dyspnoea induced in patients who suffer from chronic bronchitis by getting into a cold bed? The dyspnoea is a reaction undoubtedly, and restores the equilibrium; the application of external cold drives the blood internally and stimulates the centres; but if the external temperature be allowed to remain low, or if the reaction is not enough we find the centre becomes depressed and collapse is apt to supervene. The advantage of a warm bed and night-shirt, with the hot alcoholic "night-cap" are not needless luxuries with patients of this class; they are ascertained upon examination to be founded upon true physiological principles, though taught us by a well-regulated and observing empiricism.

We find the same explanation holds good in cases where the introduction of alcohol, chloral, opium, etc., in poisonous doses produces a low temperature. The necessity for the long continuance of artificial respiration is sufficient proof of the depression of the respiratory centre; and here we must remember that such direct respiratory depressants as chloral, opium, etc., given in doses which are far from toxic, may, under certain conditions, induce toxic symptoms; more especially is this the case when the embarrassed respiration necessitates the aid of all the accessory muscles of respiration to keep life in, and when the voluntary assistance required of the patient in his agonising efforts will not prevent him for a moment to direct his attention to anything else but the act of breathing; the piteous appeals for sleep which he makes, and which his medical attendant from motives of benevolence does not resist, often becomes the "last straw;" yielding to the entreaty of the patient he prescribes a dose of chloral, and he sleeps, but never to wake again! Now, why is this? It is only a difference of degree between this total cessation of function and the less fatal, but not less dangerous results so often found as the only explanation of a night-draught administered with the greatest expecta-

tion of benefit to the patient. Take the gravest illustration first: the intense efforts—*voluntary* be it borne in mind—are needed on behalf of the patient to keep the respiratory act going sufficiently well to maintain a hold upon life; he dare not sleep, for if so he knows such violent dyspnoea would be induced as to rouse him again to his dreadful task of assisting the respiratory powers, but the deadly night-draught deprives the higher centres of the power of responding to this call of the enfeebled respiratory centre for his voluntary assistance which could always be roused when the sleep was *natural*, not *induced*, and the violent action pointing to exhaustion soon falls into the long intervals with spasmodic actions which I described formerly, and death ensues. The sentinel guarding the avenues whereby death enters the citadel is drugged, and no attempts are made to interfere with its entrance, and the garrison, already worn out by long continued resistance, lays down its arms and capitulates. The strength of the besieged, as it were, lay in the integrity of the sentries stationed outside the citadel; an alarm from them roused the retainers—the voluntary muscles which act as accessories—and for a time, at least, their position remained impregnable; but once deprive the centre of this needed assistance and resistance is impossible. The respiratory centre will bear a great deal. The old Spanish Inquisitors knew this. To torture a man to death by embarrassing his respiration was a slow and intensely painful mode of death. A whiff of air for a minute or so would restore the centre sufficiently to ensure another long spell of agony. They knew this well enough. So it is in disease. The sudden attacks of dyspnoea oxygenise the blood sufficiently for a time and preserve life; but once deprive the patient of the power of perceiving this call for providing the voluntary assistance, and it fails for the want of such aid. These patients after the deadly draught are said to sleep away. Quite true, but the sleep was the cause of death. What, then, may be asked, are we to do in such distressing cases? Is there no chance of relief compatible with safety, since we have found the method just described so deadly? certainly there is; but not by giving sedatives. The indication for successful treatment here is to encourage the failing respiratory centre, to stimulate it, so that *it can of itself* perform the function of respiration without calling to its aid the voluntary assistance of the patient; though wearied we have found it to be long-suffering, and what gave devilish satisfaction to the Inquisitor, is a source of comfort to us in our struggle with death.

When the respiration is embarrassed, the centre will respond to other stimuli than carbonic acid, which it will be my duty to mention later on, and after their administration (provided there be no special complication co-existing to sink the powers), the respiration becomes slower and is less dependent upon voluntary auxiliary efforts, consequently our patient sleeps because the frequent calls which roused him in a manner so imperative are absent. His sleep then is natural and not so deep as to prevent his being roused. Should the carbonic acid increase to an extent incompatible with involuntary respiration, a momentary interruption, while a few long breaths are taken may be all that is necessary, and though not so profound his sleep is to him safe. His watch-towers are manned by sentries who are free from the taint of dishonesty, and perfectly clear in sight, and who will at once raise the alarm upon the first appearance of the enemy, and when all that may be needed will amount to

little more than a demonstration of their forces (as by a few long breaths) without engaging in actual conflict (as an attack of dyspnœa).

I must apologise for this digression, but if it has been of any use in assisting my readers to understand these attacks of dyspnœa so often witnessed by us, I take for granted their forgiveness.

In cases where the lungs are rendered unfit for respiration, as in pneumo-thorax, empyema, pleural effusions, pneumonia, etc., the blood necessarily becomes more venous, owing to the deficiency of lung tissue to aerate it; and for the same reason it contains less oxygen; hence dyspnœa (and once for all, let it be understood that by this term I include frequent, or excited, as well as slow or laboured respiration) in order that the frequency of the respiratory act may compensate for the deficiency of pulmonary tissue. Precisely similar conditions, but produced by different causes as we met with in the dyspnœa of anæmia and chlorosis.

The first respiratory movements in the newly-born child may, in like manner, be attributed to the interruption of the respiration carried on through the placenta, which causes a deficiency of the oxygen of the blood with an increase of carbonic acid. This especially is strong evidence against the hypothesis that the peripheral ends of the vagi are responsible for the primary respiratory act; there is no doubt they modify it by their reflex properties, but this is far from generating the impulse. This property of the pneumo-gastric is well seen in asthma, which frequently owes its origin to some reflex cause, irritating material entering the lung, either as dust or vapour, gastric disturbance, etc.

It will not be out of place if I copy the characteristic description of an attack of asthma as given by Trousseau, in Lecture xxi., vol. I, of the "Sydenham Society's Translation," p. 617: "An individual in perfect health goes to bed, feeling as usual, and drops off quietly to sleep, but after an hour or two he is suddenly awakened by a most distressing attack of dyspnœa. He feels as though his chest were constricted and compressed, and has a sense of considerable distress; he breathes with difficulty, and his respiration is accompanied by a laryngo-tracheal whistling sound. The dyspnœa and sense of anxiety increasing, he sits up, rests on his hands, with his arms put back, while his face is turgid, occasionally livid, red, or bluish; his eyes prominent, and his skin bedewed with perspiration. He is soon obliged to jump off his bed, and if the room in which he sleeps be not very lofty, he hastens to throw his window open in search of air. Fresh air, playing freely about, relieves him. Yet the fit lasts one or two hours or more, and then terminates."

Here, owing to a spasm of the muscular fibres of the smaller bronchi, the interchange between the gases of the blood and atmospheric air is interrupted, and violent dyspnœa occurs; the efforts to bring about this interchange increasing in intensity, until the respiratory force overcomes the spasm, or the tonic contraction of the muscular fibres gives way from exhaustion of the nervous force which kept it up. Directly the dyspnœa has secured its end, and restored the air to the blood in the pulmonary capillaries, the fit ceases, and the patient recovers. We recognise the regulating or preservative power of the respiratory centre in these cases, apart from the clinical aspects of asthma; the dyspnœa is the result of the spasm, but only in so far as the spasm is the cause of the blood becoming more venous. It is not my intention to go

further into the pathology of the asthmatic attacks, more than to say that some irritation of the pulmonic plexuses, which have very extensive connections with various nerves, either direct or reflected, is responsible for the spasm. The subsequent dyspnœa, I would venture to explain upon the grounds laid down of deficiency of oxygen and increase of carbonic acid in the blood circulating through the respiratory centre leading to the nervous explosions, so characteristic of a paroxysm; in fact, a provision of nature whereby asphyxia is prevented.

Asthma, from cardiac disease and chronic bronchitis with emphysema, has its origin in a different manner, though the dyspnœa is identical. Any cause which prevents air entering the chest induces dyspnœa; be the cause a thoracic tumour, aneurism, pleural effusion, pulmonary consolidation or congestion, or on the other hand, conditions of the lung or its surroundings, preventing its full expansion as seen in emphysema, diaphragmatic pleurisy or paralysis, fixation of the walls of chest, etc. In the form of asthma occurring in cardiac disease, more especially mitral stenosis, dilatation or fatty degeneration of the cardiac walls, we find this condition of thoracic impairment from the increased quantity of blood in the pulmonary vessels. In such cases we find usually that respiration is free, provided no effort is made. When any exertion is undertaken the extra quantity of blood thus brought to the lungs reveals the fact that so much air-space is encroached upon, and prevents the residual air in the alveoli being sufficiently purified for the purposes of blood aëration, dyspnœa is the result. The fact of the breathing being unembarrassed while quiet is maintained, will lead the observer to direct his attention more particularly to the *fons et origo mali*, and prevent the administration of expectorants in the place of cardiac stimulants. Patients with cardiac disease are also subject to attacks of "asthma," coming on during sleep, and due neither to effort nor irritation, as may be the case in true asthma or emphysema. He awakens up suddenly, roused by the energetic action of the accessory muscles of respiration called into operation by excited nervous impulses, and in order to render their assistance more effective he sits up in bed and fixes the shoulders by grasping his knees, the bed clothes or some object near him, thus giving a fixed point for the sterno-mastoids and pectorales to enlarge the thoracic cavity which has been encroached upon by pulmonary engorgement. The heart may be palpitating forcibly, telling of the energy of the contractions of the right ventricle—for here the right side of the heart is greatly distended. After a more or less violent attack of dyspnœa, the blood becomes sufficiently oxygenated to act less as a stimulant, or more properly speaking, the activity of the centre is diminished, the distended muscular wall of the heart recovers itself, and the patient is relieved, thankful that the worst part of the paroxysm is over, and yet far from being at ease. The *continuance* of the effect contrasts strongly with true asthma, and helps us to differentiate these affections, and at the same time in a case complicated with emphysema, we may to a certain extent judge of the relative value of cardiac or pulmonary causation, and treat accordingly. In both cardiac and emphysematous asthma it is noticed that the paroxysms come on during profound sleep more frequently than at other times, except perhaps in emphysema, when causes such as irritating vapours, dust, etc., induce them. The reason for this may be found in the fact that during sleep the respirations fall both in frequency and depth; in one

case allowing greater pulmonary engorgement; in the other favouring the impure condition of the blood. In both we find so soon as the dyspnœa has succeeded in restoring the blood to its ordinary state, the attack ceases; but in one, owing to the cardiac complication, complete relief is not experienced so speedily as in the other.

(To be continued.)

CASE OF RUPTURED TUBAL PREGNANCY— OPERATION; RECOVERY.

BY GEORGE GRANVILLE BANTOCK, M.D.

ON the morning of the 21st June, whilst making my usual visit at the hospital, Mr. Sadler Curgenvén, of Craven Hill Gardens, called upon me with reference to a very urgent case, which he believed to be one of extra uterine foetation. I at once proceeded with him to the home of the patient—the wife of a coachman—and found her in bed, lying on her left side, looking very pale and exhausted, and with a very feeble pulse of about 150. On attempting to turn on her back, for the purpose of more thorough examination, her first effort caused her so much pain that she started into the sitting posture with a scream, referring the pain to the shoulders chiefly, and in a minor degree to the lower abdomen. Giving her a little time, she got into proper position, and I then found the following conditions:—The abdomen was slightly tympanitic, resonant everywhere, except in a limited region just above and to the left of the pubes, where there was a feeling of moderate resistance. Owing to the great tenderness of the abdomen, palpation was difficult. The cervix was rather long, os sufficiently open to admit the tip of the index finger, the body of the uterus evidently inclined backwards towards the promontory of the sacrum. Above and in front there was an ill-defined tumour of small size, with a feeling of resistance in its immediate neighbourhood, so that it was difficult, even on bimanual palpation, to define the exact limits of the tumour. There was, moreover, a slight sanguineous vaginal discharge. I then obtained the following history:—Age twenty-six, one child five years ago, menstruation regular, with moderate flow, characterised by pain for several days before and during the first day; last period from March 10 to 13 of this year. About a month after this, *i.e.*, about the middle of April, had some morning sickness, but not very marked. For the last six weeks had complained “on and off” of sharp pain in the left groin and hypogastrium, the first onset being marked by a slight

sanguineous discharge. On the 18th (June) she was seized with a sharper pain than usual, and for a short time felt rather faint. She then sent for Mr. Curgenvén. About ten p.m. of the 20th she was again seized with very acute pain, and almost immediately fainted. Mr. Curgenvén was at once sent for, and arrived about eleven o'clock. He found her very faint and exsanguined, with some retching. She continued to be sick at intervals during the night, and was given small pieces of ice to suck. At his visit in the morning he found her much in the same state, and believing he had to do with a case of extra-uterine pregnancy, he lost no time in applying to me.

From the history and actual condition of the patient, I had no hesitation in coming to the conclusion that Mr. Curgenvén was right in his diagnosis, and that rupture had taken place with much effusion. Seeing that the accommodation for an operation was most inadequate and unsuitable, in an atmosphere reeking with the emanations from the stable below, and desiring to put the patient under more favourable circumstances for recovery, I at once set about making preparations for her immediate admission into the hospital, and recommended that, in the meantime, small quantities of hot water should be substituted for the ice. I was also influenced by the idea that it was desirable the patient should have an opportunity of recovering somewhat from the shock, and with this view I did not regard the delay as adding to the danger. Partly through the difficulty of procuring a suitable conveyance, and partly through the desire of the patient to see her mother first, it was after eight p.m. before she was received into the hospital, and it was about eleven o'clock before I saw her. The sickness still continued, though in a less degree, but the pulse was of better quality in volume though not in frequency (150), and she had less pain. The temperature at nine o'clock was 100. At two a.m., June 22nd, it was 99.6; at seven o'clock, 99.2, and at nine the pulse was 140, with decidedly more volume than at my first visit. Mr. Stormont Murray administering chloroform Mr. Doran assisting, and in the presence of Mr. Curgenvén, Dr. Vulliet, of Geneva, and several of my colleagues, I opened the abdomen with an incision of about two and a half

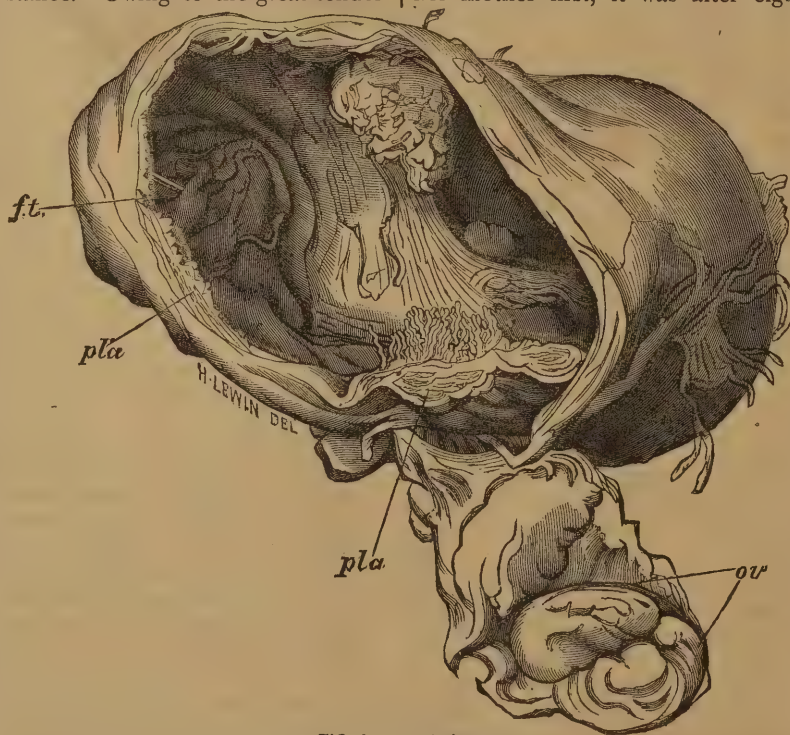


FIG. 1.—Front view.

inches. On dividing the peritoneum, the diagnosis was at once confirmed by the escape of a large quantity of blood, partly fluid, and of a dark colour, partly coagulated. As rapidly as possible I broke through some adhesions of intestine of recent formation, seized and extracted what I thought was, and what proved to be, the sac, and in doing so it was evident to me

that its contents were for the most part squeezed out. While endeavouring to get to the base of the sac, and in the act of clearing away masses of blood clot, I brought up the placenta with the foetus attached. It had been lying in front of the uterus and over the bladder. As soon as I had separated the sac from the back of the broad ligament and its connections with the large intestine and sigmoid flexure—the work of only a few seconds—I forcibly compressed the pedicle—to prevent any further bleeding—and then secured it with my usual figure of 8 knot and final circular ligature. In bailing out the blood with the hand I came upon a solid mass behind the uterus, and to the right side of Douglas's pouch. On lifting it out it was found to be a large firm blood clot, as large as my fist, partly enveloped in the omentum. The pelvis was now thoroughly washed out with a full stream of warm water, and when it was clear I examined the appendages on the right side. Finding they were matted together by inflammatory action and otherwise extensively adherent, I thought it advisable to remove them also. The pelvis was again washed out with a small quantity of water, a drainage-tube was inserted and the wound closed. When the patient was in bed, the pulse was fuller than before the operation, and counted only 100. This was evidently the effect of the chloroform, for as its effects passed off the pulse gradually rose in frequency till it reached 130 seven or eight hours after. About two hours after operation three ounces of beef tea were administered by the rectum and repeated every three hours. Although there was no chloroform sickness, yet as the patient had been retching through the night it was deemed advisable to keep the stomach clear, and therefore nothing was given by the mouth till eighteen hours had elapsed. The temperature at ten and twelve p.m. stood at 100.4, only .4 above that of the night before, and at the end of twenty-four hours it was only 99.2. At the same time the pulse was only 102. In the course of the night of the 23rd—24th, the patient had some vaginal discharge with distinct uterine pains. That these marked the expulsion of the decidua—forming a complete cast of the uterine cavity—is evident, for when the vagina was washed out at half past six a.m., 24th, the cast came away. In the afternoon of this day the beef tea injection were discontinued. The patient was then taking milk and barley water and gruel. At the end of four days and seven hours the drainage tube was removed. At that time the pulse was only 94, and the temperature was normal. From this time the progress was uninterrupted, the patient was out of bed on the sixteenth day, and she went home on the twenty-third day, looking remarkably well.

It will give some idea of the condition of the patient before the operation, when I say that she has no recollection of entering the hospital, or of anything that occurred till the day after the operation.

The specimen was sent to the museum of the Royal College of Surgeons, where the cyst has been mounted, as seen in the accompanying illustrations. The following report was written by Mr. Doran, from examination of the specimen in its fresh state. "The foetal sac is thin walled and about three inches in diameter: it consists of the outer part of the Fallopian tube. The remainder of the tube (fig. 2 f. t.) lies on the posterior surface of the sac, into which it opens by a crescentic aperture nearly half an inch in diameter. The inner wall of the sac is for the most part smooth, except where shreds of placental tissue"—(notably one piece at the tip of the sac shown in the drawing) "are attached to it. The ovary is small, hardly an inch long in diameter, and perfectly separate from the sac and remainder of the tube.



FIG. 2.—Posterior view.

"The opposite appendages are diseased, the tube being completely obstructed, very tortuous, and bound to the ovary by perimetritic adhesions. The ovary is double the size of its fellow, and measures an inch and a half in its long diameter; its surface is puckered.

"The foetus, a male, measures three and a quarter inches from vertex to coccyx. It is well formed. The cord is nearly seven inches in length. The placenta, broken into three pieces during the operation, shows no abnormality."

Fig. 2 is a posterior view, showing the tube (f. t.) much enlarged, as it runs along the back of the cyst.

A more complete history of the case, subsequently

obtained, points to the occurrence of acute salpingitis after the birth of her child five years before. The peculiarity of the dysmenorrhœa—viz., its commencing several days before the flow—is now pretty generally understood to point to tubal disease. When I found the right appendages so extensively diseased, agglutinated to one another by the inflammatory process, and with a small sac where the infundibulum was applied to the ovary, I had no hesitation in removing them with a view to the prevention of a second occurrence of the same accident. In reference to this I would call attention to a paper published by Dr. Vulliet of Geneva, in the *Revue Medicale de la Suisse Romande*, No. 3, 15th March, 1884, in which he points out that, in the case reported, the foetus was arrested in the outer end of the tube, in a cyst formed by the adhesion of the infundibulum of the tube to the ovary. Two conditions are necessary for tubal impregnation in this state of things. First, that the tube must be permeable

from the uterus into the tubo-ovarian cyst; and second, that the portion of the ovary abutting on the infundibulum must furnish the ovum. Whatever the necessary condition be, whether the existence of a tubo-ovarian cyst with the relations just described according to Dr. Vulliet, or a diseased state of the lining-membrane of the tube, according to Mr. Lawson Tait, I felt that I was justified in removing the right appendages also, to say nothing of the sources of possible and probable trouble in the future, to which the patient would have been exposed had they been left.

The case carries this lesson, that it behoves general practitioners, who are most likely to be first consulted in such cases, to make themselves acquainted with the symptoms of extra-uterine gestation, in order that, on the occurrence of serious symptoms, they may not overlook such a dangerous complication. In this respect too much credit cannot be given to Mr. Sadler Curgenven for his diagnosis in this instance.

Special Articles.

A MEDICAL ABSTAINER'S DEFENCE.

BY ALFRED J. H. CRESPI, WIMBORNE.

THE editor having with rare impartiality permitted me to explain the position which a medical total abstainer feels justified in taking in regard to this question, I enter on a task whose justification lies in the singular misconceptions with which scientific temperance is still too commonly regarded in professional circles. The opinions of teetotal doctors on the platform and in the press have, of recent years often been mercilessly criticised, and it is usual enough for their efforts for the general good to be totally misunderstood, while their methods are not fairly grasped. Why should this be so? No medical practitioner, who appears on the temperance platform, should be accused of having anything to gain therefrom; such work is almost invariably gratuitous, and generally, in consequence as it were, of his philanthropic exertions on behalf of others, there is a falling off in the social position of his clients, while his professional income declines. Those who minister to the vices and follies of mankind, as Sir James Paget has so touchingly observed, are far more likely to reap a golden harvest than those who refuse to countenance what they believe to be wrong. The medical abstainer might at least be credited with being actuated by the loftiest, though possibly the most mistaken philanthropic motives, and he ought to be given a patient hearing.

Having attended hundreds and spoken at scores of temperance meetings, where I have heard many of the foremost temperance advocates of the day, and having long pondered over the question—less to the advancement of my practice and prospects than, I humbly hope, to that of the temperance cause—I trust that without any appearance of presumption I may claim to know something of the arguments on which thoughtful abstainers rely. As a preliminary let me remark that the earnest but intolerant and illogical speeches sometimes heard on the temperance platform from good but ignorant men, do not represent the opinions and methods of the more distinguished leaders of the movement. Those speeches I do not defend, although I contend that their very extravagances, however offensive they may be to educated listeners, are not necessarily unmixed evils. They are, because of their

very violence, intelligible to many of the persons attending such meetings. Many a churchman who detects a thousand inconsistencies in Methodist sermons admits that those sermons have done incalculable good, and are better appreciated by the peasantry and the labourers, who mostly flock to chapels, than the scholarly dissertations of Bishop Lightfoot, and the impassioned appeals of Bishop Boyd Carpenter. I remember the close attention with which I listened to Bishop Wilberforce, when as a very young man I heard him during my Oxford days, and similar admiration I should have expected every thoughtful man to feel for the great pulpit orator, and, nevertheless, I have known educated Dissenters, accustomed to the more forcible logic and plainer speaking of the chapel, complain that the brilliant Bishop of Winchester was uninteresting and monotonous. No educated man who has tried to interest an average temperance gathering can avoid noticing how imperfectly he generally succeeds, and his contempt of his hearers is not lessened when he listens to the tumultuous applause, which rewards the noisy and coarsely witty declamation of some speaker, whose ignorance and want of precision of thought and language permit him to rattle on for an hour mouthing platitudes as though they were inspirations and hazarding assertions that will not bear investigation. But the noisy temperance apostle is the more successful speaker. His aim is to keep obtuse working-men from the public house and to frighten them into living soberly and steadily, and he probably succeeds. Successful oratory is carrying one's point, and the speaker who accomplishes that is the better man, at least for the time being. The objections to temperance gatherings, forcibly urged by the educated, would vanish were they to take opportunities of listening to Archdeacon Farrar, Bishop Temple, Dr. Richardson, and, though I do not place him on the same level, nor would he accept that distinction, the Rev. Owen Luttrell Mansel, M.A., Rector of Church Knowle, Dorset, the esteemed President of the Dorset and Southern Counties' Temperance Association. Mr. Mansel has studied the poor: he likes and honours them; he lives among them, and he knows their capabilities and temptations, and while his speeches are distinguished by earnestness and common sense, he avoids extravagant assertions and misstatements. But to his honour and to theirs, no educated speaker commands larger and more attentive audiences in the South West Counties, so that it is possible, though unusual, for an educated man to address working-class audiences with success. The motives which influence Mr. Mansel are precisely those of Cardinal Manning and the late Samuel Bowly, of Gloucester. Has anyone ever detected fanaticism, intolerance, and exaggeration in the temperance utterances of the great Cardinal? rather has he not seen the love of man, the earnest wish to remove temptation, and to make life easier and loftier. That man is to be pitied who can come away untouched from the Cardinal's appeals. But it is not necessary that temperance speeches should be, on the one hand, coarse and loud, or on the other, indistinguishable from sermons. Mr. Robert Sawyer, vice-chairman of the Church of England Temperance Society, and once well known as a most successful and kind hearted criminal lawyer, is a grand fellow—genial, earnest, lively, and thorough: no audience could complain that he is dull, none that his only object is to amuse. Such men as Mr. Sawyer are the glory of the temperance platform and redeem it from the charges sometimes, and not altogether without foundation, brought against it.

The most powerful and remarkable exposition of temperance principles from a master of vivid description is "Danesbury House," which ranks among Mrs. Henry Wood's most successful works. Unfortunately for its circulation, its moderation of tone, fidelity to life, and beauty of language, are beyond the appreciation of most total abstainers. The tone of temperance literature is feeble, and the level of its periodical press low, but there are conspicuous exceptions. Cant and imposture, jealousy, and rivalry are felt in every part of temperance work, and this may in part account for the low opinion which the influential classes have of a reform that, whatever the faults of some of its supporters, should command cordial and generous sympathy and help. It grieves me to observe how imperfectly the educated classes understand the motives, and follow the arguments of total abstainers. "Of all investments of time," wrote Mark Pattison, "writing controversy is one of the most wasteful; your adversary is confirmed by what you say in his own opinion;" and perhaps my defence of total abstinence will strengthen the opposition of its enemies, and arm them with fresh weapons. No form of opposition is so effective, none withal so disingenuous and unworthy of thoughtful and right-thinking opponents, as crediting an adversary with opinions he does not hold, and then exposing their fallacy. The hostility to total abstinence is, I grant, not always captious and ungenerous. In many cases it is the outcome of ignorance, in others of garbled reports of third-rate speeches, and of papers, which have been put together with the best motives, but which no more do justice to the vital points at issue than would a schoolboy's rendering of Horace reproduce the spirit of the original.

We do not hold that it is wicked to drink a glass of ale, that the Bible inculcates total abstinence on all, and that the moderate drinker is worse than the drunkard. I have many times heard assertions that would bear such a construction from temperance speakers of a certain stamp, but I have regarded them with much disfavour and excused them on the ground of ignorance and bigotry. All the same our position does not admit of clear exposition. Lawyers hold it to be opposed to the sacred traditions of English jurisprudence to build up a charge of high treason on a number of weak pleas—any one of which by itself would be insufficient—but which in the aggregate are overwhelming. This may be fair to the accused, but in matters of conduct we have to act otherwise, and a departure from the severe rules of logic is permissible. Men are not seldom induced to follow a certain course by putting together many weak reasons on the one side and balancing them against a smaller number of still weaker on the other. In Cardinal Newman's "Apologia" there occurs a passage just to the point: he observes, "He who made us has so willed that in mathematics indeed we should arrive at certitude by rigid demonstrations, but in religious inquiry," and I may add in politics, morals, and medicine, "by accumulated probabilities." Could we prove that Christianity commanded all men to abstain from alcohol, as it undoubtedly does from lying and thieving; could we show that in the smallest dose alcohol was a poison, like belladonna and strychnine, we should make alcohol over to the doctors, and banish it from the table; the temperance cause would be triumphant and the agitation over, but we have to fight our battle with far other weapons. The temperance is essentially a great philanthropic movement. It is not a question whether moderation is unobjectionable or not. It finds its *raison d'être* in the

suffering and sin caused by, or at any rate aggravated by excessive drinking; its aim is to free many, who cannot be moderate, from temptations which they have not otherwise the physical and moral strength to resist; it rests on the assumption that total abstinence is safe and advantageous, and that the use of stimulants is at best unnecessary, at worst a constant danger. "Depend upon it," says Cardinal Newman, "the strength of any party lies in its being true to its theory. Consistency is the life of a movement." Now, as far as the safety of teetotalism goes there can hardly be a difference of opinion; most moderate drinkers admit the wisdom and superior economy of total abstinence, at any rate in health, and this is a very great point in our favour.

The unanswerable and crowning argument in support of total abstinence is the misery, extravagance, and disease caused by intemperance. Does any one deny that the ravages of excess are not confined to one country, still less to a single class? It is difficult to estimate with any approach to precision how many lives are annually lost, how many crimes committed, and how much suffering arises through drink. But every clergyman, lawyer, judge, policeman, doctor, and guardian knows that intemperance is a tremendous evil. The tone of society is undoubtedly improving, relatively and absolutely. Less money is spent on drink, and a still higher moral tone seems to be at hand. The drink bill of the United Kingdom has fallen from £147,000,000 a dozen years ago to £125,000,000 last year, and that is something, still these vast sums only represent the direct expenditure, and to calculate the real cost of drink to the nation, enormous amounts would have to be added for the loss of time from sickness and accident, while what sum would cover the sin and the crime! Enough sin and suffering in the United Kingdom is still due to drink to fill the hardest heart with shame and appal the least sympathetic.

Mr. Weyland, a most respectable London City Missionary, stated in evidence before the Lords' Commission on Intemperance, that in twenty minutes 307 people were seen and counted by himself in one gin palace, at six bars, drinking, and there were other bars at which bottles and jugs were filled for consumption elsewhere. If this is the business which one gin palace at the East end of London can do, what is the business done by 150,000 public-houses in the course of a year?

To contend that education and culture teach the legitimate use and abolish the abuse is not true. The masses are not educated, moral and cultured, and will not materially improve in our time, while every medical man knows that not even the hallowing surroundings of clerical life, nor the lofty motives, which should actuate every clergyman, nor the pressure of public opinion are enough to prevent intemperance among the clergy. As for other classes, fortunate must that doctor be, who has reached middle life, and not known case after case, in all grades, from the highest to the lowest; and his own profession furnishes its full quota of drunkards. The outside world knows little of what passes in the privacy of many privileged and fortunate homes; none the less surely are tragedies being enacted that for pathos and suffering fiction itself could not match. What secrets every busy doctor could reveal were not his lips sealed—intemperance, vice, depravity, and disease little suspected by the world. To attend any medical gathering and argue that intemperance was exclusively or mainly the vice of the poor and ignorant, would provoke disapproval from

everyone present. No statement so opposed to fact would be hazarded by the youngest and least experienced practitioner; and yet I have heard venerable clergymen and influential clerical chairmen argue with dignified composure that education had banished intemperance from polite society, and I have thought of the bitter words of Lord Chancellor Clarendon "Clergymen, who understand the least and take the worst measure of human affairs of all mankind that can read and write." A highly respectable country-town surgeon, once said, standing in the market square of the place where he had practised for over thirty years, that he had known at least one death through intemperance in every one of the many good houses and shops he could see from the spot where he was speaking. This man was no "fanatical" teetotaler. Simply a plain, matter-of-fact person, with no romance in his composition, but highly educated, well qualified as far as diplomas went, and perfectly informed as to the circumstances of his neighbours. A thousand elderly surgeons could, *mutatis mutandis*, give similar testimony. No! intemperance is not confined to any class, age, or district; it is seen everywhere, and is the most frequent cause of disease, suffering, and sin in our midst. The reader would be tired out before I had finished adducing proofs of my assertion. No day passes that the press does not contain solemn warnings from men in high station, whose lightest word carries weight, and who are not committed to the temperance movement, nay, are often suspicious of it, sometimes hostile to it. The most furious denunciations of alcoholic beverages have come from men, like Sir Andrew Clark, who are not abstainers: and, by the way, his figures go to lengths which no teetotal doctor would venture to endorse. Exaggeration is far more likely to come from a moderate drinker than from an abstainer, for the latter is a marked man, and carefully measures his statements. Were not denunciations of intemperance so solemn, they would, from their very frequency, be intolerably wearisome, and many a man would echo the words of one of the best known Dorset rectors of the day—"I am sick of the temperance question, and so tired of speeches on the subject; but my duty compels me to attend meetings and to take the chair at them." In return for all this appalling crime, suffering, and poverty, what have we? A little dear bought enjoyment. That is the cruel sting. Were intemperance accompanied by great and lasting enjoyment: were drinking alcoholic beverages a necessity of existence, matters would be totally different. We look with resignation on loss of life at sea, in mines, and in factories, because the world gains in consequence of those dangerous industries. Every miner, collier, and sailor, perishing in the discharge of his duty, we mourn over, but honour because he has died at his post, increasing the enjoyment of others. But what does the drunkard effect? Nothing, but his own ruin, and indescribable sorrow and loss to his neighbours.

Lord Bramwell made far too much in the *Nineteenth Century* of the pleasure derived from a moderate allowance of alcohol. Granting that such enjoyment is real, and on that point I cannot speak, as I have been a rigid total abstainer all my life, is that enjoyment for an instant to be set in the balance against the misery of excess? Curiously, too, Lord Bramwell, in a subsequent article in reply to one by Archdeacon Farrar, explained that he did not personally care for stimulants and seldom took them, and could cheerfully give them up; moreover he warmly commended the motives of earnest temperance workers. His praise of

wine must therefore have rested not on his own experience but on the reports of others and so might be dismissed as hearsay evidence. On the other hand hundreds of thousands of men, not life long abstainers, pass year after year enjoying existence, living honest, laborious and successful lives, neither taking stimulants nor feeling the need of them. Alcoholic beverages no more enter into their calculations than does the pleasure of smoking into that of the non-smoker. There are things the absence of which is an active and constant source of inconvenience, for example—shortness of money to the man of culture and refinement, and the longing for foreign travel to the mind stored with varied knowledge of distant lands. In my own case to see the City of Flowers and explore the Eternal City are pleasures that I never expect to enjoy, and I acutely feel the want of them. But the pleasure of taking wine can hardly intensify the joys of life, invest existence with greater charms, and compensate for serious disappointment and unrest. Most people, who take stimulants, rate the pleasure of the habit very low, and are hurt if thought to like it. Even the wretched victim of self-indulgence seldom talks of pleasure: but generally laments that he lacks the strength of will to free himself from the habit, which gives him little pleasure, but which overpowers his shattered faculties and feeble will. When too late the pleasures are succeeded by the pains of alcohol, the dreadful character of the vice is seen in all its naked hideousness.

We also defend total abstinence on the ground of its absolute safety. There may be nothing wrong in drinking a glass of beer, and a small amount of pleasure may result; but as surely as the sun is the source of light and life, so surely do drunkards come from the ranks of moderate drinkers. From some inexplicable cause this is a view of the case that peculiarly irritates the moderate drinker: he seems to think that his ruin is predicted: is it that he feels that he has known others, apparently as fortunate and resolute as himself, yield to irresistible temptation. No one can tell who is safe; no one can say when and where danger begins. Most men are never in danger: many pass through life neither better nor worse than their neighbours, and with no irresistible temptation to excess; but whether from imperfect temper or education, or from inherited tendencies, others, apparently equally fortunate in their surroundings, go wrong. Let the man who has a drunken wife, and the son who watches over a besotted mother, say whether intemperance is a trifling matter. Children do not easily form the habit of using beer and spirits, any more than they readily take to smoking. No effort is required on their part to persevere in total abstinence; and as long as they remain abstainers, they are absolutely safe from the terrible vice of drunkenness. Can any one question that it would be better for the young of both sexes to be brought up and to remain abstainers—what a different country this would be in forty years. Moderation has been preached for two thousand years, and has in no appreciable degree prevented intemperance.

Next to personal safety should be placed the power which teetotalism gives to influence and reclaim others. Let ministers of religion try to reform drunkards, and let them notice how seldom their efforts are successful until they are known to be total abstainers and they will learn a useful lesson. Hundreds of the clergy of all denominations have taken up the temperance cause and have signally failed until they have put their hand to the plough in right good earnest. Once admit that intemperance is among the greatest evils of the day, once determine to work to

counteract it, and the only possible course open to the philanthropist is to sign the pledge. The clergyman's hands are then mightily strengthened, always providing that he does not, like many of his cloth, let it be known that he regards himself as a martyr. In that case his connexion with the temperance cause will not aid him, and the too probable ridicule and hostility of his friends will still further paralyse his efforts. The rapid spread of temperance principles among the clergy, though not always from lofty and pure motives, and not always seconded by the practice of their families, has done much to make total abstinence respectable. When the clergyman takes the matter up earnestly, consistently, and generously, and receives the support of his family, he does incalculable good and gathers many earnest sympathisers around him! The same is true in a less degree of the medical practitioner, who never has personally cause to regret that he has joined the temperance movement, though his professional emoluments have a tendency to be diminished by his advocacy of total abstinence.

The dietetic value of stimulants—another stronghold of the moderate drinker—has been incontestably proved by recent scientific investigations to be small, so that without actually denying that alcohol may have some nutritious properties, it is beyond dispute that it is a preposterously expensive food. To buy stimulants simply for their dietetic properties is in the highest degree extravagant. We do not need to cite the opinions of abstainers on this point; we have only to read those of men, like the late Dr. Letheby and Baron Liebig, who are not and never will be teetotalers to smile when wine and beer are described as cheap and useful adjuncts to the dietary.

The therapeutic value of stimulants is small, though that part of the matter need not detain us. If alcohol is a valuable drug, or rather a drug which the scientific physician cannot do without, a point not absolutely settled, that is no valid argument for defending its habitual use by millions, who are not ill. Moreover, we most positively contend that in many of the instances in which alcohol is administered as a drug, and in strict accordance with medical custom, its place could be taken with equal certainty and with smaller temptation by less objectionable agents. It would be something were medical men to think twice before prescribing alcohol. It is often lavishly and unnecessarily ordered, and the countenance of the profession is consequently given to its habitual and liberal use. Cases constantly occur in which the medical attendant could do as much for the recovery of his client by discountenancing alcohol, while the excuse for excess would be avoided which the doctor's recommendation of alcohol is often made to serve. Would it not be far more scientific and satisfactory, when the physician prescribes alcohol, were he to order it as Spirit of Wine or as one of the legitimate tinctures of the "Pharmacopœia." Believe one who knows from having made many inquiries, the surgeons to Rechabite Tents do not often find it necessary to prescribe stimulants, and when they do, they have to send them in medicine bottles duly labelled, like any other drug, and at their own expense. Rechabite Tent surgeons are very rarely total abstainers, so that their almost universal testimony cannot be dismissed as prejudiced.

As stimulants pure and simple to tide over some temporary difficulty, alcoholic beverages have less to recommend them than many familiar and perfectly unobjectionable agents of the pharmacopœia, while the uses of tea, coffee, and hot water are greater than is often supposed, nor can

alcoholic beverages claim special consideration as economizers of ordinary foods if the results of many cautious recent experimenters are fairly considered. I want to be clearly understood. I am not now discussing whether alcohol is or is not a useful and reliable drug in some cases—fewer, perhaps, than was once thought though—but I am contending that when prescribed by the practitioner, it would be far more scientific to order it as spirit of wine, in definite doses, at specified hours, and not loosely as alcoholic or fermented beverages.

In short the conclusion is forced upon us that alcoholic beverages have little to recommend them, even in the arguments of their supporters, while the objections to their use reach appalling dimensions which grow in magnitude the longer they are considered.

The subjoined extract is interesting: part is from Baron Liebig and though open to criticism, is not out of place; the remainder is from the late Dr. Milner Fothergill, whose respect for brandy was such that he told me, last March, that he had ordered as much as three pints in twenty-four hours for a patient without killing him. Perhaps there is some inconsistency in denouncing alcohol in a portion of the following quotation, and then prescribing it in enormous doses. Curious: one morning at half past eight, I was reading his excellent paper on "Work and Overwork," from which I made the subjoined extract, and a few hours later I found myself in the most unexpected manner sitting in front of that able writer and accomplished practitioner in a carriage, a long way off; that was the last time I ever spoke to him, and then he favoured me with a most refreshing harangue on the value of brandy as a drug which taught me that the most recent views as to the imprudence and danger of ordering brandy medicinally had not penetrated into every metropolitan physician's consulting room. Would to heaven that they had: our labours would then be easier. "The consumption," writes Dr. Fothergill, "of ardent alcoholic drinks by poor populations is notorious. The monotony of their labour is answerable to some extent for the craving after alcoholic stimulants; *that* must not be overlooked. But it is not the complete nor full answer to the question—why do these town populations crave after spirits? Beer is the drink par excellence of rustics, of the inhabitants of small towns, and even of the Cockney who follows light pursuits. Liebig has something to say on that subject well worthy of deep consideration. 'The use of spirits is not the cause but the effect of poverty. It is an exception from the rule when a well-fed man becomes a spirit drinker.' Surely this remark has many exceptions. 'On the other hand, when the labourer earns by his work less than is required to provide the amount of food, which is indispensable in order to fully restore his working powers, an unyielding, inexorable law or necessity compels him to have recourse to spirits. He must work, but, in consequence of insufficient food, a certain portion of his working power is daily wanting. Spirits, by their action on the nerves, enable him to make up the deficient power at the expense of his body, to consume to-day that quantity which ought naturally to have been employed a day later.' "His physiological capital," continues Dr. Fothergill, "is clearly being exhausted, and it is no wonder, that under such circumstances, he dies comparatively early and certainly prematurely. Not only is such a plan essentially and radically bad, but alcohol is a terribly dear form of food. Alcohol in such concentrated form is a potent aid to the already existing tendency to tissue-degeneration. When overwork calls in

alcohol to its help, the unholy alliance quickly works the most disastrous results, and brings the organism swiftly to general decay. Even when the evil results of the deadly combination are not so marked, general deterioration is manifest in impaired power of labour, in inferior work, in lessened hours of toil. The tendency is to saunter away working hours in the ale-house; partly because work is found so irksome that it is pleasant to do nothing—perhaps worse than nothing; partly because the capacity to labour has been undermined. Of course here again there is not uniformity; one organism yields more readily than another. Toil and alcohol, and sometimes the alcohol with very little toil, soon reduce one man to the level of a social pariah; while in another case a hale old man will be found who works hard every day—“never misses any time,” his fellow-workmen say—yet who drinks daily an amount of spirits which would soon tell sorely on an average person. But such a case does not militate against the general soundness of the statement that overwork, combined with alcohol, is a sure and certain road to body-ruin.”

Little by little the profession is coming over to the side of rigid temperance, and even in many cases to that of total abstinence. The flourishing condition of the British Medical Temperance Association is a proof: founded only a dozen years ago, and for a time a very weak bantling, it has now some hundreds of members, and its numbers are growing, not rapidly but surely, while its proceedings are arousing greater interest in the medical world. The professional periodicals admit the subject as they would not have done twenty years ago, and sometimes allow passages to appear, which strongly advocate total abstinence. Indeed how could this be otherwise? Does any class see more of the horrors of intemperance than the medical? Who can so accurately gauge its prevalence? who can more fairly calculate the suffering it causes? and may I add that no other class is in an equally favourable position to proclaim its horrors in unambiguous terms. Medical practitioners have in the main fought the battle of sanitary reform, and have done much other good work for the common weal, much to the injury of their own pockets be it remembered, and so do I believe that they will also fight the good fight of temperance, and, whatever the cost to themselves, more and more boldly discountenance the use of alcohol—in health at any rate, and restrict the resort to it in disease within very narrow limits: and when they do prescribe it, will give precise directions, and administer it in scientific forms.

ENGLISH HOSPITALS SEEN THROUGH A PAIR OF PORTUGUESE SPECTACLES.

BY OUR SPANISH CORRESPONDENT.

“Oh wad some power the giftie gie us,
To see oursels as others see us.”

SENHOR ALFREDO COSTA has been giving, in two long letters published in *A Medicina Contemporanea*, of Lisbon, his impressions of London hospitals and surgeons formed during a few days' stay in August last. How much time was devoted to this investigation he does not state, but part of two days seems to have been spent in Charing Cross Hospital, and of another in the company of one of the staff, who acted as cicerone. Now, either from an abnormal development of *esprit de corps*, pressure of time, possible linguistic difficulties, or as a practical joke on the part of this gentleman, the enquiring foreigner seems to have been

permitted to depart with the impression that Charing Cross Hospital is not only typical of its kind, but the most famous and largely attended in the metropolis. Guy's and St. Bartholomew's he does not appear to have seen, and although he refers to the School of “S. Thomaz,” it is difficult from the context to believe that he really visited it. After this one is prepared for statements and judgments, which must not merely have been extremely edifying to his Portuguese compatriots, but are equally novel and remarkable to ourselves. In the first case he expresses his astonishment that in such an enormously wealthy capital as London, “Not one of the innumerable hospitals” (which he did not see), “receives any help from the national coffers; and that there should be inscribed on the front of every one the simple and significant phrase, ‘Supported by voluntary contributions.’ And at the gates of each a box inviting the alms of the passers-by, few of whom fail to drop in something—much or little according to the length of their purse—towards the cost of the charity. Collections are, also, made amongst the rich, and the result paid into a common fund, which is divided amongst the different institutions, and this money, supplemented by that found in the boxes at the doors, is their only and sole income.”

Of course one sees in this some vague conception of the Hospital Sunday Fund, and of the magnificent contributions of the grateful British mechanic to the hospitals, which exist chiefly for his and his fellow's benefit; but yet only a misleading fragment of the truth. “Then, the income of each hospital is independently administered by its own medical staff, a very few outsiders being permitted to assist.” He is naturally surprised to find that there is no State School of Medicine, and that each student learns how or where he please; “some famous teacher or convenience of position alone determining his choice, since the cost is much the same in all.” He informs us that the University of London—which he not unnaturally confounds with University College Hospital—is, to a slight extent, under the control of the State, “for when the students feel that they are prepared for examination they petition the Government, which directs a jury (*sic*) to be empanelled to examine them; but, as this jury is nominated by the twelve physician-surgeons, who form the Society of the University and the Government never objects to their choice, the control is more theoretical than real.” This society is, likewise, supported by voluntary contributions, and he thinks if the State erected the building in which it meets it does very little credit to the country, for “it is something like the Mizericordia Hospital of Porto, a fine front, with abundance of statues and Corinthian columns, and a miserable (*podridão*) interior, with small rooms and corridors without light and air.” This “abundance of statues” reminds me of a story I met with in a Portuguese novel, to the effect that when Lor Jon Russel ordered the expulsion of the Catholic bishops a number of statues of various sizes was directed to be set up in his honour.

As might be expected, the hospitals of London, being without assured income or State subvention, “fall utterly behind all modern ideas and requirements; many are private houses ill-adapted to their purpose, others are new buildings of the worst construction from an hygienic point of view, or straggling additions to crazy old piles, black and weather stained.” In the whole of London, it is sad to learn, there is not one—not excepting the famous hospital at Charing Cross—which can compare with his own Estephania!

The former he carefully examined, and says that it is "a small building, situated in a corner of a quarter near the Strand, the noisiest street in the city, of three floors, which chiefly get their light and air from a narrow and dirty yard. The out-patient department is underground, close to the kitchens, and is filled with a crowd of ragged and evil-smelling people. There they are examined, and minor operations are performed in an atmosphere damp, heavy, and foggy" (this was in August), "and amidst a sickening stench—as bad as that of a convict infirmary—which pervades the whole building." Well; how a Lisbonese can complain of, or even pretend to detect, stenches, passes my comprehension; he might as well lecture us on something he had seen approaching Lusitanian indecency!

However, after this distressing experience, he has his reward; for he meets in one of the wards S—— (he gives the names in full in somewhat erratic spelling, but I must spare the blushes of what he calls my "modest" countrymen), the most distinguished and audacious (*arrojadissimo*) of surgeons, and another. "Shanly B——," who is rather more so, and who together have made this malodorous hospital the most famous in London, and, in spite of the stink, the home of Listerism; and above all, "a sympathetic and unassuming young man, of most attractive amiability," who showed him all over the hospital, and explained everything in its arrangements—but, let us hope, not our hospital system generally—set microtomes and other engines at work, and then enabled him to enjoy one of the most delightful days he had spent in England, by taking him down to * * * * * and introducing him to "the delicious home-life of his picturesque and elegant house in that little Cintra of London, where he gives himself up to the caresses of a lovely wife and an enchanting daughter, and the scarcely less alluring fascinations of science, which he cultivates with equal brilliancy and modesty."

Senhor Costa also visits Harrow, "one of the most important secondary schools in England," and is shown the tomb-stone "on which Byron was accustomed to write the most famous of his poetical works," and then returns to dine with "Mreese" (Mrs.) —, who not only caresses her accomplished husband, but enthusiastically assists him in his histological studies, and—but the original would suffer in translation—"nos trabalos puramente photomicrographicos cuja technica conhece em todos as suas minudencias!" And he devotes an entire column to a description of the scientific wonders this extraordinary (*estremosa*) family, assisted by a friend of almost equal genius, displays to him, and a final burst of admiration, in superlative adjectives, of their captivating modesty and affability.

But we must return to the hospital: he had been told that the house surgeons were elected by a competitive examination, "so severe that it is greatly dreaded," and as he is anxious to experience its terrors he obtains permission to be present; and he is cruel enough to say that the practical part consisted in merely applying a few of the most ordinary bandages and dressings, and the written answers to the following questions: "1. What should a surgeon do in a case of strangulated hernia? 2. What is the surgical procedure in a case of retention of urine? 3. What is the clinical difference between a case of ilio-femoral luxation and fracture of the femur?" "After some days, and a due weeding out of the candidates, one was chosen who had been the longest time in the hospital, and enjoyed the sympathetic attraction of being a son of the most esteemed professor."

He is delighted with the operating theatre—"quite equal to that of our S. José"—and its perfect cleanliness (*irreprehensivelmente limpo*), and especially with the order, respectfulness and complete silence which, during an operation, reigns therein. The economy in time, too, strikes him as remarkable; the noiseless entrance and exit of the patients; the deftness of the bearers in handling the stretchers; "the automatic help of the nurses and assistants moving with the ordered regularity of a machine," is contrasted with no grudging praise with that of the clumsy and chattering blue-coated and yellow-belted porters of his own ever vociferating countrymen. He thinks it is due to that spirit of blind obedience by which we are characterised in every class and under all conditions. He notices that chloroform is rarely used, ether and gas taking its place, and strongly advises that the same substitution may be made in Portugal; although, he says, that not a single authenticated case of death from the use of the former anæsthetic has been reported there.

As regards schools in general, he thinks that Portugal has little to learn from us—it would be interesting to know on what data he founds that dictum—and least of all from the medical schools of London. "Some of them, as that of S. Thomaz, have a passable installation, and a pretty good museum with some fair specimens." But those which were pointed out to him as the best, and which he visited, "such as Charing Cross, King's College, University College, Royal Surgeon's College (!, St. Thomaz' College, are excessively poor in materials for teaching, with miserably inadequate buildings, laboratories, etc. Foetid dissecting rooms, where the mean zinc-covered tables and the rest of the fittings exhale a most pestilent stench, almost insufferable even to the most *blasé* frequenter of the anatomical theatre; quite unventilated and almost without light and air. Many of them are in the top story of the hospital, lighted *only* from the roof; others are half underground, boxed up in a narrow courtyard. All are miserably small, with hardly enough gas brackets or tubs of solution of boracic acid, much less tables or rather narrow trestles, for the subjects are so few that several students are to be seen working away at each; sometimes under the direction of a professor, or else by the aid of models from the museum, not always strictly accurate and treated with very little care. At Charing Cross they only get three to five subjects per week, and sometimes days and weeks pass without our being sent into the crowded dissecting room."

"The clinical demonstrations are well attended, and one can there easily take stock of the scientific knowledge of the students." He was present at several, and "can hardly believe that there is a man amongst the same class in Lisbon who could answer so badly and hesitatingly; as a rule every question from the professor was followed by a period of profound thinking, and then the blurting-out of the answer 'I don't know.' Occasionally there was a shot more or less wide of the mark. They seemed to have acquired anatomy enough to know that there are two bones in the leg, but nothing as to their position, or if the muscles are inside or out; and there were no new-comers but *alumni* of two years' standing." But the scene which showed him most clearly how little medical knowledge the average British student can get into his skull was this:—"S—— had just amputated the great toe of the right foot: when looking round the circle of his pupils, and showing the clean open wound, he asked in an ironical tone, 'Now, can any

one of you tell me which organ I have just cut off?' There was a dead silence!" "In London, a man who can amputate a finger at the first joint is clearly regarded as a Vesalius or a Herophilus." The means for teaching physiology—which term he seems to use as equivalent to physics—are equally poor. At St. Thomaz' the class-rooms are very large, furnished with a gas-motor, etc., and "in one corner were several cages of rabbits and monkeys destined for vivisection." There were the usual stock reagents, but very few microscopes and other instruments, and little apparatus. "Not one-tenth the number of either to be seen in our Escola Polytechnica."

"In England, all theoretical teaching is relegated to a secondary place; practical clinical knowledge absorbs everybody's attention. The schools are mere appendages; the hospitals vast laboratories, but not even then of the first class." "As regards asepsia, the reality is far from the ideal. Shanley — was pointed out to me as more Listerian than Lister himself; but his antiseptic amounted to simply dipping the scapel in phenol solution and soaking therein sponges which had been used three thousand times before. Or, if a pair of forceps fell on the floor, or amongst the sawdust in the spittoon which received the blood, one of the by-standers would pick it up, just rinse it in the lotion and hand it to the surgeon, who took the whole proceeding quite as a matter of course! *Ex digito gigans*. The best antiseptic here seems to be the low temperature; if we were as careless under a southern sun our mortality would go up terribly." "All this sounds paradoxical when we remember the distinguished position English surgeons and physicians take in the world of science. But we must not confound what is here the ordinary range of medical education with that which is afterwards entered upon by men who hope to reach one of the higher grades of the profession. There is in London a series of medical societies, and to enter any one of them necessitates the passing of a severe examination after long and expensive education. For instance, to be a *fellow* of the Royal College of Surgeons, or of King's College, etc., is to gain a title of much importance and honour. But for the lower grades men may be extremely ill-bred, and illiterate, and inferior in all respects to the same class in Portugal."

"And there is no need here to ask any man of position what his speciality is; at every corner there is an hospital for some disease or ailment, and when a fellowship has been taken the next step is to attach oneself to one of these hospitals, and then court popular favour in the particular branch or twig he has budded in; and in a city possessing the library of the British Museum and the anatomical collection of Hunter—which is apparently not connected with the Royal College of Surgeons—'there is no difficulty in finding at least the material for the highest attainments.'"

Now, amongst the many blunders—some highly ludicrous—made in this hasty generalisation of a passing stranger, knowing little of our ways and probably still less of our language; there is one point, which although imperfectly caught, is of great moment to ourselves, and possibly to our country: that we have no State School of Medicine, nor national standard of professional competency, and that licences to practice can be obtained in Great Britain after training, which is a farce, and examinations which are little less than disgraceful shams.

The status of the average medical man in England unhappily is lower than it is in any continental nation, and

our ranks are largely recruited here from classes which would not think of entering them there. As a result we have a large and increasing body of men amongst us whose social training, personal habits, education and technical knowledge is not such as to enable them to associate on equal terms with gentlemen—with, say, their peers the clergy of the Church of England. And, as text-books, lectures and addresses are constantly showing us, there are few even amongst the higher class who can speak and write their mother-tongue with that perfect ease and polish which no education, however liberal, can give in the absence of inherited social excellence and concomitant good breeding.

VOLUNTEER MEDICAL REGULATIONS.

PART. III.

(Continued from p. 403.)

(1) Application for Examination of Regimental Stretcher Bearers.

This must be made by the officer commanding the regiment to which the bearers belong, on Army Form I, 1224, to the P.M.O. of the district. This form requires signing by the medical officer as instructor, and by the colonel, and must be sent to the P.M.O. with a covering letter, stating date, time, and place proposed for the examination. If the class includes men from different regiments, separate forms must be sent in by each corps. A medical officer may instruct men from several different corps in one class, but the applications for examination must be forwarded regimentally. There is an advantage in large classes, in that the stretcher drill is more interesting with a good sized company—say eight to twelve stretchers. There should be not less than eight men [*see* "Queen's Regulations," 1885, Sec. XIV., par. 85].

[All regulations on this point will be found in the "Queen's Regulations and Orders for the Army," 1885, Sec. XIV., pars. 80-90.]

(2) Recruiting of Stretcher Bearers (Provisional and Recommended).

The consensus of opinion, amongst those volunteer surgeons who have trained stretcher bearers, is decidedly in favour of *recruiting men into the battalion*, at the rate of two men per company, instead of drawing them away from combatant work to teach them stretcher and hospital duties. The reasons are: (a) company officers naturally object to give up men, and when they do so are sure to hand over their worst men to be trained by the surgeon; (b) a much larger field of choice is open to the surgeons to select suitable men (instead of taking such as the captains will give him), as many men will volunteer for hospital work who have not time or inclination for the rougher and more constant work of drill in the ranks, and as a rule a better class of men will join for the more scientific and honourable work; (c) men who have recruited especially for medical work are less likely to be tempted away by the combatant non-commissioned officers with the promise of stripes.

(3) Steps of Rank in the Bearer Company.

These should always be on account of greatest proficiency in hospital and stretcher work, as tested by examination, and not according to seniority of service. For instance, in the event of a man recruiting for this work who has formerly been a sergeant or corporal in a volunteer corps, he should enter the bearer company without taking precedence over older members until he has proved himself

their superior in that special work. Rank in a bearer company should always be conferred by the surgeon in command. Where men *drawn from* the companies have already been trained, it will be best in the future (as they leave) to recruit new men *into the battalion* as already advised. Men specially recruited for this work should do sufficient drill and class firing to make them "efficients;" but when in camp they should have a separate Bell tent, close to the hospital tent, and draw their rations as a distinct company.

(4) Promotion.

The rank of surgeon-major is granted after fifteen years service. Service as acting-surgeon will be allowed to count as commissioned service for such promotion, and five years service in the ranks of the Auxiliary Service will be allowed to reckon as one year of commissioned rank.—[*Vol Reg.*, 1887, Part I., Sec. II. par. 94.]

(5) Retirement by Age.

Officers who are above sixty years of age will be required to resign their commissions, unless specially recommended by the general officer commanding the district, when they may be permitted to continue in their appointments until they attain the age of sixty-seven years.—[*Vol. Reg.*, 1887, Part I., Sec. II., par. 151.]

PART IV.

(1) Lines of Medical Assistance in the Field.

[All medical officers should be thoroughly acquainted with the lines of medical assistance from front to rear of an army in the field, and regimental stretcher bearers should also have these explained to them at the commencement of their course of instruction, in order that they may understand their position in the general medical organization of the force. It adds much to their interest in their duties if they know what becomes of the wounded man after they have carried him to the rear. An intelligent appreciation of such medical organization will also prevent them from entertaining the mischievous idea that when a bearer company of the volunteer medical staff corps is on the ground their services as stretcher bearers are not required, for they will see that they and the staff corps work in concert.]

With a force in the field, each regiment has its medical officer and two men per company trained as stretcher bearers (the regimental aid). In rear of these are "the three lines of medical assistance," the duties of which are entrusted to the men of the medical staff corps.]

(2) Duties and Equipment of Regimental Surgeons at Manœuvres and in the Field.

(1) A medical officer will be attached to afford temporary aid to each regiment, battery, troop, or company of Royal Engineers on active service in the field.—[Par. 703, "Regulations for the Medical Department of Her Majesty's Army.]"

(2) He will be under the orders of the officer commanding the corps to which he is attached, but will receive instructions from and be at the disposal of the principal medical officer of the division or brigade in which he is serving.—[Par. 704 *ibid.*]

(3) His baggage will be carried in the regimental transport, and he will be furnished with a servant from the ranks of the corps.—[Par. 705 *ibid.*]

(4) Medical officers attached to regiments of cavalry and infantry will be supplied with the following staff, and medical and surgical equipment: one corporal from the corps to which he is attached; one private, ditto, as orderly; one pair field medical and surgical panniers complete; one field

medical companion, with water bottle complete; one surgical haversack complete; one tent, surgery, single, circular—those attached to batteries, troops, companies will be supplied with one private from the corps to which attached as orderly; one field medical companion, with water bottle complete; one surgical haversack complete.—[Par. 706, *ibid.*]

(5) Each medical officer will likewise be furnished with one copy "Army Book 39;" and those attached to batteries, troops, and companies (who are not supplied with filled panniers containing stationery) will have the following stationery: foolscap (plain half-sheets), half-quire; envelopes (note octavo), No. 25; indelible pencils, No. 4.—[Par. 707, *ibid.*]

(6) The medical officer will draw the foregoing equipment from stores on taking the field, and will hand it over for carriage in the regimental transport; but it will remain in his charge, and the commanding officer will arrange that it be at all times at his disposal.—[Par. 708 *ibid.*]

(7) It will be replenished when necessary by requisition on the field hospitals.—[Par. 709, *ibid.*]

(8) Officers commanding corps will be responsible that field stretchers (bearers, hospitals) are drawn by the regimental quartermaster in the proportion of one for each company, carried regimentally, and placed at the disposal of the medical officer.—[Par. 710, *ibid.*]

(9) When men are reported sick they will be sent to the medical officer with the usual company's sick reports in duplicate (*see* par. 59 of these Regulations). If they are passed from hospital one copy of the report will be sent with them, and the other, on which the man's disease and destination will be marked, returned to the officer commanding. The medical officer will enter these names, diseases, and disposals in his hospital diary ("Army Book 39"), but he will not be required to keep any other record, or furnish returns and reports, except such as may be called for by the principal medical officer of the division or brigade.—[Par. 711, *ibid.*]

(10) Every man reported sick must first be seen by the medical officer before he passes to a field hospital.—[Par. 712, *ibid.*]

(11) The medical officer will afford such temporary assistance to sick and wounded as may be required in camp, on the line of march, and in action.—[Par. 713, *ibid.*]

(12) He will, while placing every check against men reporting themselves sick unnecessarily, or passing to the field hospitals without due cause, at the same time be careful that no man requiring hospital treatment, or who is really unfit for duty, is detained in front with his corps.—[Par. 714, *ibid.*]

(13) When an action is expected the trained stretcher bearers of a corps, in the proportion of two per company, will be placed at his disposal. They will leave their rifles and valises in the carts, take the stretchers, and proceed under his direction to the scene of action. The orderly will also accompany him, carrying the field companion, water bottle, and surgical haversack.—[Par. 715, *ibid.*]

(14) The corporal will remain in charge of the field medical panniers, so that they may be made available during or immediately after the action.—[Par. 716, *ibid.*]

(15) The medical officer in severe actions will only afford such temporary aid to the wounded as may be within his power until they are succoured by the bearer companies, and will not undertake any serious surgical operation.—[Par. 717, *ibid.*]

(16) He and the regimental bearers will never lose touch of their corps during an action, but keep in close proximity

to them, and on no account attempt to carry the wounded long distances back, or in any case beyond or in rear of the collecting stations formed by bearer companies.—[Par. 718, *ibid.*]

(3) **General Outline of Medical Aid.**

(a) The first line consists of the *bearer companies*, of which there are two to a division, or one to each brigade. Their duties are to assist the regimental bearers in collecting the wounded during an engagement, and to attend to their wounds at a selected site out of fire (the dressing station).

(b) The second line of medical assistance is composed of *field hospitals*, which are pitched in rear of the battle field, and receive the wounded from the bearer company, which is then free to follow its brigade in the advance. Field hospitals are provided with transport to enable them to follow the movements of the troops. There are three field hospitals to each division, one to each brigade, and one in reserve.—[See "New Army Corps Tables."]

(c) The third line includes all the *stationary hospitals*, and comprises the stationary hospitals on the lines of communications—resting places for the wounded on their way to the base—and the general hospital at the base of operations (the base hospital).

The system of medical organization of a force in the field aims at freeing the front of sick and wounded by transferring them to the rear as quickly as possible. The movement of the troops in the face of the enemy is then not hampered by non-effectives. A man when wounded is carried to the collecting station of the bearer company, either by bearers of his own regiment or by those of the medical staff corps. Here ambulance waggons are waiting to transport him to the dressing station, where his wounds are attended to, and he is sent back to the field hospital, whence he is transferred, as soon as his wounds permit, along the lines of communication to the base, breaking his journey at the rest-hospitals on the road. At the base hospital he remains until he is recovered, or until he can be sent home.

(4) **General Duties of Medical Officers at Field Days and Manœuvres.**

All medical officers, as soon as they arrive on the ground, report themselves to the principal medical officer of the force, or of the brigade to which their regiment is attached. If a man falls out on the march he must be seen by the regimental surgeon, who will, if necessary, send him to the rear of the column for transport in the ambulance wagon. A non-commissioned officer, or sick orderly, should accompany the man to the rear. The man's arms and accoutrements should be sent with him to the rear on all occasions. When the regiment goes into action the medical officer should make himself acquainted with the position of the collecting station of the bearer company of his brigade, so that he may instruct his bearers where to take any casualties. The regimental bearers must always rejoin their regiment as soon as they have handed their patient over to the medical staff corps at the collecting station; they are not permitted to go further to the rear.

On reaching quarters each evening, or at the close of a field day, the medical officer should furnish the principal medical officer of his brigade, as well as the commanding officer of the regiment, with a return of casualties showing the regimental number, rank, and name of each man who has fallen out during the day, with the nature of his illness or injury, and remarks showing whether the man returned to duty or was handed over to the medical staff corps, etc. For this return Army Form B, 256 ("Company Sick Report") may be used.

On the regiment arriving at its destination for the night the men's quarters or billets should be inspected by the medical officer, especially to see that they are not overcrowded.

(5) **Regulation regarding Volunteers sent into Military Hospitals.**

Non-commissioned officers or men, while serving with regular forces, and necessarily admitted to military hospitals, will only be allowed free diets during the period for which free rations are issued to their corps. If they are detained in hospital after this period the full cost of the diets received by them subsequently must be paid for at cost price, unless in hospital through injury.—[See *Vol. Reg.*, 1887, Part II., Sec. II., par. 667; and Part II., Sec. III., par. 737.]

(6) **Examination of Recruits.**

In future the primary medical examination of recruits will be dispensed with, and therefore no more civil medical examiners of recruits will be appointed.

Under the new system the recruiter will examine men desiring to enlist, to see that they have no palpable deformity, have free use of limbs and joints, that voice and hearing are good, that eye-sight is equal to test by the test dot-card, will question the men as to being ruptured or subject to fits, see that there are no obvious signs of disease or ill-health, that the appearance agrees with the statement of age, and that the recruit does not appear to have served before.

MEDICAL REFORM.

BY ARTHUR CHARLES KENT.

THE present complicated state of medical qualifications has, in this period of inventions, investigations, and scientific advancement, been a source of vast trouble to many of our community, and therefore, surely the followers of Æsculapius ought to have a little reform in their, at present, awkward position. At the present time a man qualified as a medical practitioner, holding a diploma granted by one of our numerous licensing bodies, is looked upon as a fully-fledged doctor, by the people at large, no matter how poor his degree or qualification may be, because chiefly the ability of a man is hunted out from general practice, not success as a student. Then, even to make matters more precarious, a man holding an inferior diploma from some out-of-the-way college, is at liberty to commence practice as a physician, surgeon, apothecary, and accoucheur, backed up by his diploma, which he brandishes in a truly unstately and uncivil manner, acting in the usual capacity of visiting, and prescribing for the sick, as do the most learned and foremost physicians of the present day.

In the legal profession there are several grades of superiority—namely: solicitor, barrister, and Q.C. (we need not include the judges, etc.), and for these three different denominations work is set apart absolutely for them, according to their station or rank. It is not so in the medical profession. A patient may go and consult with any consultant, without the intervention of an inferior medical man; whereas, in the law the solicitor has first to be instructed, he then retains the services of the barrister, and of the Q.C., who are to be paid through the same medium. The solicitor acts by himself in minor legal actions; the barrister in the medium capacity, and the Q.C. deals with the higher branches of the profession. The Q.C., as is well known, is not allowed to defend a State

prisoner; whilst the barrister is quite at liberty to defend anyone whom he should think fit. No barrister is allowed or permitted, under any circumstances, to accept a fee under the sum of one guinea for services rendered, and if he should at any time be found acting in contravention to this rule he is very soon admonished for his unprofessional conduct. The fees of the Q.C.'s vary, but rarely, if ever, under the modest sum of five guineas; and very often we hear of an enormous amount of money being paid to a Q.C. in order to retain his services.

Now, take the order and form of the clergy, according to manner prescribed by the Church of England. There are three different denominations—deacon, priest, and bishop (between the priest and bishop several officers of the Church are named, as archdeacon, canon, dean, etc., but they in reality are still priests). The work set apart and intended to be demonstrated by these three evangelists is altogether of a distinct nature to that of the legal or medical professions. In the first place take the deacon, whose work is simply to read a portion of the prayers, the lessons, and occasionally preach a sermon. The priest may repeat the absolution, administer the sacrament, solemnize marriages, and bestow a blessing on the congregation in church, before they leave, after the completion of the service, all of which functions the deacon is not allowed to perform. The bishop confirms candidates who present themselves to be admitted partakers of the Holy Communion, ordains priests and deacons, consecrates churches and burial-grounds, and performs numerous other functions, all of which the priest is absolutely disallowed from performing.

But in the medical profession such grades of standing and superiority are almost unknown, the community at large presuming that all medical men are absolutely equal, and in fact it is of so complicated a nature, that the mysteries are nearly as puzzling to the practitioner himself as to the people at large, although it is well known that the positions of the Royal College of Physicians carry with them rules and preference—the licentiate being equal to a solicitor and deacon, the membership to barrister-at-law and priest, and the fellowship to a Q.C. and bishop. Matters at the Royal College of Physicians appear to be smooth; but there is always one drawback even in smooth matters. Why not hold the M.R.C.P. as really a junior consultant, and the F.R.C.P. as a senior consultant? At present the only visible preference enjoyed by fellows over members is their being allowed to attend those secret meetings held within the majestic portals of the College.

The Royal College of Surgeons have little preference allowed to a fellow over a member. Then, again, both the fellows and members are not exempted by any laws from acting in the most minor capacity of the medical profession. It would perhaps be wise if the R.C.S. would place their curriculum in equality to the R.C.P., and have for their lowest diploma a license in surgery instead of the present mode they have. But presuming they would rather remain in their present method, it would be suggestive to hold the M.R.C.S. equal to a L.R.C.P., solicitor, and deacon; a F.R.C.S. (by examination) equal to a M.R.C.P., barrister, and priest; and a F.R.C.S. (honorary) equal to a F.R.C.P., Q.C., and bishop; and have laws similar to those of the Royal College of Physicians, that is to say the fellowship of the Royal College of Surgeons (honorary) be a senior consultantship in surgery, and the fellowship by examination be a junior consultantship.

Furthermore, have specified branches of medicine and surgery. Have the licentiate of the R.C.P. a qualification in medicine alone, instead of as at present a double qualification in medicine and surgery; and the diploma of the R.C.S. be a qualification in surgery absolutely. Again, to enable a physician or surgeon to dispense his own medicine he be enforced to be in possession of the Hall license. This routine may, no doubt, appear somewhat complicated, but in the end it will be simplicity in itself.

A student of medicine, surgery, midwifery, and pharmacy, aspiring for medical fame, having complied with the statutes of the governing bodies, takes the diploma of membership of the R.C.S. He is then a recognised surgeon, and must be allowed only to practise surgery; to enable himself to visit patients for other purposes than surgery he must needs be possessed of the licence of the R.C.P.; to practise obstetrics, be in possession of a diploma to that effect; to practise pharmacy, hold the L.S.A. diploma. Therefore, a student having complied with all the existing rules pertaining to the governing bodies, takes the qualification of L.R.C.P. He is then allowed to visit and prescribe for patients, but not to act as surgeon or accoucheur, nor will he be recognized as a consultant. Again, a person holding the diploma of M.R.C.S. may visit and prescribe in surgical cases only. Also, a man in possession of a diploma of L.M. only be allowed to attend obstetric cases, and be registered as an accoucheur.

It is a rule which exists amongst country practitioners, when desirous of obtaining advice concerning any of their patients, to summons a local medical man for such consultation, whose qualifications may perhaps be of the lowest rank, thereby robbing consultants of their positions. Therefore it ought to be enacted that no medical man may legally join another in a consultation, unless he be in possession of qualifications or degrees which would entitle him to act in the capacity of a consultant.

In case a man should feel inclined to practise beyond the sphere his diplomas carry him, the college whose laws he is violating be empowered to prosecute any such delinquent. The public must then, in this case, be informed of the different denominations of medical practitioners, and practitioners should, furthermore, place upon their door-plates the subject of their title or titles, as "Dr. Jones, Physician," "Mr. Smith, Surgeon, Apothecary, and Accoucheur," "Mr. Robinson, Surgeon and Accoucheur."

The next subjects to be considered are—the University degrees. The medical degrees conferred by the present Universities in England are—M.D., M.B., M.S., and B.S. The M.D. and M.B. degrees are medical, and M.S. and B.S. surgical. Therefore, as a suggestion, it will perhaps be well to place the degree of M.D. in equality to the F.R.C.P.; the M.B. equal to the M.R.C.P.; the M.S. equal to the F.R.C.S. (honorary), and the B.S. equal to the F.R.C.S. (examination). Then, therefore, a person holding the degree of B.S. equal to a F.R.C.S. (by examination), be allowed to practise surgery as a junior consultant, and so forth with the other degrees.

Now we come to the Scottish, Irish, and Foreign degrees. These, of course, cannot be allowed to be equivalent in England to English degrees, that is to say, an English M.D. being equal to a F.R.C.P. is allowed, only to practise as a senior consultant in medicine; but foreign degrees, not being of a similar standard as English degrees, cannot well be permitted to take a place of the highest rank; so then the M.D.'s of Foreign Universities might be placed upon an

equal with an English L.R.C.P., carrying with it the title of Dr., and the M.B. of Foreign Universities be equal in England as the L.R.C.P., and so forth with the other degrees.

Now, to consider the diplomas of the Royal Colleges of Surgeons and Physicians Edinburgh, Faculty of Physicians and Surgeons Glasgow, Royal College of Surgeons Ireland, and of the College of Physicians, Ireland. At the present time there abounds in England a vast number of practitioners, possessing the conjoint license of the Royal Colleges of Surgeons and Physicians of Edinburgh, who are allowed to practise unmolested. Perhaps it would be well to enact that any person possessing diplomas, other than granted by English boards, be excluded from practising in England; for, in the Legal profession, the English, Scotch, and Irish solicitors are absolutely different, and no Scotch or Irish solicitor is capable of practising law in England until he shall have passed the Examination of the Incorporated Law Society; but, of course, such proceedings could not be enforced in the medical profession, on account of the different branches of medical science. A gentleman possessed of the L.R.C.S. and L.R.C.P. Edin. before being allowed to practise medicine in England should qualify in some branch of the science in England, which would then legalise his already obtained diplomas, and allow him to be capable of practising as far as his diplomas carry him. Again, a person qualifying in Scotland as L.F.P.S. Glasgow, desirous of practising in England, must obtain an English qualification; obtaining the licence of the Society of Apothecaries, he is then allowed to practise as a surgeon, in equality to a M.R.C.S., and as an apothecary, backed up by his qualifications of L.F.P.S.G. and L.S.A. Again, a person already qualified as a M.D. St. Andrew's, L.R.C.S. Edin., and M.A.O. Queen's University, Ireland, is unable to practise in England, but obtaining the diploma of licentiate of the Hall, he is then at liberty to practise in England as a physician, in equality to a L.R.C.P., as surgeon, and accoucheur, and as an apothecary, and may legally style himself by the title of Dr. If a practitioner—or rather a consultant—holding qualifications as F.R.C.S. and F.K.Q.C.P. Ireland, takes an English qualification, say the degree of M.D. Durham, he then will be allowed to practise in England as a senior consultant of medicine and surgery, and the same if a person possessing the F.R.C.S. Edin., takes the degree of M.B. Lond., who then will be recognised as a junior consultant of medicine, and senior consultant of surgery. A man holding degrees of M.D., M.Ch. Queen's University, Ireland, is in an equal position in Ireland, as one possessing the M.D., M.S. London, would be in England, but were they to change places, both would be incapacitated from practising, until qualified in the land they emigrated to; but if the Irish doctor took out a qualification in England he would only be able to practise in equality to a L.R.C.P., M.R.C.S., and to the extent his recently obtained diploma would allow him; whereas the English doctor taking out a diploma in Ireland, is then able to practise upon an equal ground as he did in England; neither would be capable of practising in Scotland until possessed of a Scotch degree or qualification; and the Irish doctor would only be allowed to practise in Scotland in equal capacity, as he did in England, that is to say, in equality to a L.R.C.S. and L.R.C.P. Edinburgh, whereas the English doctor is equal in Scotland to a Scotch F.R.C.P. and F.R.C.S. Edinburgh. The same rule to be existing

between Scotland and Ireland, as between Ireland or Scotland, and England.

Now about the engagement of consulting physicians and surgeons. It would perhaps be wise for country practitioners, intending to send a patient to a consultant, or to engage a consultant to visit his patient, to fully describe the case in a like manner as the engagement of barristers, that is to say, by brief description of the case in writing, the fees for such consultation to be paid through the practitioner engaging, not the patient to pay after the consultation as at present. By the above we might place the profession of medicine in a higher standing, and upon a similar foundation as the legal profession.

Reviews.

The Tongue as an Indication in Disease. By W. HOWSHIP DICKINSON, M.D., F.R.C.P. 8vo, pp. 114. London: Longmans, 1888.

THIS volume contains the Lumleian Lectures delivered at the College of Physicians, in March of the present year, the matter and the manner whereof are by no means easily put before our readers. As a mode of getting out of the difficulty, we shall begin at the end, instead of at the beginning of the book, and quote first from the author's "Conclusions."

"The tongue," Dr. Dickinson observes, "is an index of constitutional states, seldom of individual diseases. . . . It has been fancied that the tongue presents a map of the empire of disease . . . but in truth the tongue has no such local signification; it seldom points to solitary or isolated disorders, but it is rather a gauge of the effects of disease upon the system than an indication as to the locality of it. It is often a guide in treatment, so far as treatment is general, not local; and it is an important help in prognosis. It may, indeed, be doubted whether any means open to the physician, including the pulse and the thermometer, give him more insight into constitutional states than he can derive from the tongue. Clinically it always speaks the truth, and in a language which is not foreign to the experienced physician. And how much truth, or rather how many truths, are to be read on how small a page!" . . . "The two factors which stand before all others in the making of the medical indications which the tongue presents, by which I imply those changes which are connected with remote or general states not local disorders, are the heat of the body and the secretion of saliva." . . . "The tongue, indeed, has a whole book of prognostics written upon its surface. A glance may suffice to show whether it is on the road towards health or from it, and thus tell us at once what could otherwise be ascertained, and then less surely, only by a historical research."

For Dr. Dickinson's clinical exposition of the indications thus furnished by the tongue, we turn back to the earlier pages of this work, where we find them tabulated and arranged in a classification of twelve different forms, each of these forms having a coloured illustration of its microscopical characters. It is only right to call attention to the great excellency of the execution of these plates and woodcuts, by which the author's description of each form of unhealthy tongue is more readily appreciated. Disquisitions on the secretion of saliva, the causes and effects of its deficiency, the condition of dryness of the tongue, the action of food

upon the tongue, and the influence of the nervous system in various diseases, together with a tabular statement of these varieties in 366 patients, are given by the author.

The work is preceded by introductory observations, conveying a brief historical sketch of observations upon the morbid conditions of the tongue by pathologists who have preceded the present author; who has, however, so completely exhausted the subject as to render more evident clinical deficiencies which are, we should add, completely obviated in the exhaustive monograph which we have now had under consideration.

W. B. KESTIVEN, M.D.

The Son of a Star: a Romance of the Second Century. By BENJAMIN WARD RICHARDSON. Three vols. London: Longmans, Green & Co.

WE depart from our usual custom in reviewing the last original work from the pen of Dr. Richardson, and we do so because he is a member of our confraternity, and because it is a new thing for a thinker, trained in the severe methods of medical practice, to write a novel. A contributor to our pages said last month that medical practitioners, from their opportunities of getting to read character, and of seeing life in all its phases, ought to be profound scholars in the field of human nature, and to enrich our literature with works of enduring fame. Dr. Richardson seems to have shared our contributor's view, and to have tried his hand on a task demanding not only the profoundest insight into character, but a vast range of antiquarian and historical learning. Time will show what the verdict of the world will be on his venture—one that, at any rate, has the merit of originality. The task he has undertaken was peculiarly difficult, for in addition to the dramatic power required, it demanded a classical training rarely to be found in any except the alumni of our great public schools and ancient universities. We will not pause to criticise however, for, on the whole, Dr. Richardson has done his work well and thoroughly, and the least we can say is that he has produced a novel, which all who commence it will read through, while many will be deeply interested and will return a second time. Predictions are dangerous; still we think that the work will be a success, and that whether it adds to the fame of the illustrious author or not, a fame already so well established, and resting on so sure a foundation, that it would be difficult to add to it, it will not find a dangerous rival in his other voluminous writings. The novel deals with the history of the last great Jewish revolt, that headed by Simeon Bar Cochba, the Son of a Star, and the suppression of which led to the complete dispersal of the Hebrews and to their almost entire removal from Palestine. Real characters are in many cases introduced, and real events are described; unfortunately, however, some of the historical personages loom so nobly and grandly in the records of the past that the greatest care was needed in depicting them, and there could not but be some risk of failure, or rather of not reaching the lofty ideal demanded by the scholars of the age in making such men as Hadrian, Julius Severus, and Bar Cochba live again. To hint that Dr. Richardson has had a difficult task one taxing his admittedly great powers is only to say, what he would be the first to confess, that he does not equal Shakespeare, Scott, and Thackeray.

Writing for Englishmen, it was a happy thought to commence the narrative with an episode—apocryphal we suspect—in the career of Hadrian—a meeting between him and Simeon Bar Cochba in Western Britain. There is much felicity of language, vigour of description, and love of the picturesque, and the style strangely recalls many passages in

his earlier writings in which his love of the imaginative and his veneration for antiquity must strike every reader. The title, "A Romance of the Second Century," perhaps is intended to disarm hostile critics on the very threshold of their task. A romance disclaims all pretence at being a historical novel; at the same time we cannot avoid noticing one or two little matters which will be severely handled by professional reviewers. It was not altogether happy to introduce so much of the miraculous, especially in a work published in these sceptical days. The escape of Simeon Bar Cochba from the peril of the *torch of fire*, uninjured, after a rapid run of a mile or more, enveloped in flames, is no doubt brilliant and exciting, but anyone who knows how severe are the burns that commonly result from a very brief exposure to fire feels that his interest is being stimulated by an almost impossible occurrence. The same objection we are bound to say applies to the cures effected by Hadrian and the Jewish maiden Huldah, and we fancy these are blemishes in the work, which need not have disfigured it. Again, the Noviomagians, living seven and a half miles from Londinium, are scarcely wisely introduced. We admit that there is much humour in many passages relating to them, and we often thought of More's "Utopia," and of our present author's own "City of Health—Hygiea;" still we fear that this, too, is a blemish in what must be regarded as a serious work of fiction with a large and solid foundation of historical fact. The age is hard to please, and we no longer tolerate the flights which pleased our ancestors. Although millions read such *jeux d'esprits* as "She" and "King Solomon's Mines," we must confess that it is more to pass the time away than from any deep and lasting interest in those horrible tales. A careful revision of the book will, we think, greatly improve it as a work of art, and give it a far better chance of taking a permanent place on our shelves. Of course Richardson has many instances of the advantages of introducing the miraculous—"The White Lady of Avenel" is not the only one of the kind in the pages of Scott, and Shakespeare often borders on the miraculous—still it is better to avoid anything that savours of extravagance. These are, after all, only minor blemishes, and we once more congratulate our colleague on a success which could hardly have been anticipated. Whether he will again venture into the realms of fiction we do not know, but of this we are sure, that this work represents the labour and thought of years, and his admiration of the Jews—of their vitality and individuality—is seen in every page. To him the "Son of a Star" was a congenial task, and we are also not surprised to see that he has said a good word on behalf of simple living and abstemious drinking—a subject on which he can and does speak with no mean authority.

AN OLD OXONIAN.

Short Notices.

Elements of Practical Medicine. By ALFRED D. CARTER, M.D. Lond. London: H. K. Lewis. 1888. Fifth edition.

THE fifth edition of a work first published eight years ago still provides for the student a simple introduction to the study of systematic medicine. It has not yet expanded, as is the wont of such books, into a two volume encyclopædia. We congratulate the author on having condensed an outline of his subject into 434 pages: the remaining thirty provides illustrations of formulæ for those who are not able to devise such for the individual case; "but any slavish adhesion to fixed formulæ is strongly deprecated." We think the book would be improved by their absence.

R. S. S.

The Provincial Medical Journal,

DECEMBER, 1888.

IN the *Bulletin Generale de Therapeutique*, October 30th, M. EGASSE has an article on the chemistry and therapeutics of saccharine. We shall content ourselves with that portion of the article devoted to the record of recent experiences with the drug. M. EGASSE first calls to mind the experiments carried on by MM. VITTORIO ADDUCO and UGO LINO MOSSO, which aimed at establishing the general action of saccharine, its action on nutritive changes, the method by which it was eliminated from the organism, and the rapidity of its absorption. The researches of these investigators are familiar, and led to the general introduction of saccharine into therapeutics. The antiseptic action of saccharine has been much insisted on, as well as its property of passing off by the kidneys almost unchanged. SALKOWSKI concludes from his experience that it only possesses weak antiseptic properties, and BRUYLANT states that after having ingested, daily, fifty centigrammes, then one gramme, 1-50, and two grammes of saccharine, on analysing the urine he has established a respective loss of 20, 16, 18, and 12 per cent. of absorbed saccharine. BRUYLANT states that saccharine does not exercise any action on the chemical phenomena of digestion. He believes that it may be employed in doses of three grammes a day for a time, though he reserves judgment on a too prolonged use of it. To prevent putrid fermentation, a minimum of 2.5 per cent. of saccharine is required. ABELES has noted that saccharine in the $\frac{2}{100}$, can prevent the development of the bacterium termo; in $\frac{5}{100}$, it exercises the same action on the *Staphylococcus pyogenes aureus*; and in the $\frac{10}{100}$ it retards, but it does not prevent the development of the staphylococcus of puerperal fever.

The sweetness of saccharine led to its use for patients who could not take ordinary sugar. STUTZER, SEYDLIS, SALKOWSKI, HADELMANN, prescribed it for diabetes in small quantity, but sufficient to impart a sweet taste to the food. In France it has been similarly employed. A note of alarm was raised by M. WORMS, who announced to the Academy of Medicine, Paris, that after administering saccharine to diabetics in the dose of ten centigrammes, three of his patients were attacked with pains in the epigastrium and diarrhoea. The purity of the product might have been questioned, but M. DUJARDIN BEAUMETZ attributed the phenomena to the antiseptic power of the saccharine, the physiological fermentation of digestion being retarded, owing to its having this property. On the other hand, M. CONSTANTIN PAUL stated at the Academy of Medicine, July 10th, 1888, that he had known diabetics continue the use of saccharine for five months without any gastric disturbance. Saccharine has been praised as a dentifrice, as a wash in dilatation of the stomach. For this purpose, owing to its pleasant taste, it ought to become popular; a strong antiseptic is not required, as it passes off comparatively

unaltered by the kidneys. It has been suggested in pyonephritis and cystitis. CLEMENT succeeded in two cases of vesical catarrh, with ammoniacal urine. Here the saccharine played the part which boric acid does in washing out the bladder. STEIDELMANN tried it without success in two cases of chronic purulent cystitis. The peculiar property saccharine has of sweetening naturally attracted the attention of enterprising manufacturers, one gramme of saccharine added to a kilogramme of glucose communicating a sweetness equal to that of the same amount of sugar. Thus a door was opened out to substitution and adulteration; and, moreover, it must be remembered that the sugar industry was thus threatened. The Council of Hygiene and Salubrity of the Seine have expressed their condemnation of saccharine as an aliment, though they recognise it as a medicine. They say it is not an aliment, because it does not undergo any modification in the system; and, moreover, as it leads to adulteration, it is dangerous to public health. The Government of Austria have admitted it as a condiment. It appears clear that saccharine is not toxic. The rôle of saccharine in medicine would appear to be assured; and now that the price has been lowered, we may feel sure that in those countries where its use is not prohibited, it will be largely used, mixed with glucose, as a substitute for sugar. This will be a fraud, if it is sold as sugar; but if it is sold under its proper name, then it becomes a case of *caveat emptor*.

THERE are few books in the English language dealing with the subject of heredity in its medical aspects. The subject has been, however, enriched of late years, notably by the valuable lectures of JONATHAN HUTCHINSON. The heredity of disease presents us with many interesting problems which may exercise our minds, not only under its medical, but psychological aspects. The physical features influenced by heredity are well known; and as man's body is under the influence of the law, so it may be presumed that the higher faculties, as those of the mind, are dominated by the same law. We are born with certain inherited gifts or defects. Here there is a sharp division in the lines of thought on the power we have to escape from the influence of heredity. The primeval curse of man is sin; but most of us believe that though we have fallen under the bondage entailed by ADAM's fall, yet that we may escape, by righteousness, the penalty. This is the basis of Christianity. Following on this as a corollary, Christians believe in the words of Ecclesiasticus (chap. xv., verse xv.): "GOD made man from the beginning, and left him in the hands of his own counsel. He added his commandments and precepts. If thou wilt keep the commandments, they shall preserve thee. Before man is life and death, good and evil; that which he shall choose shall be given him. He hath commanded no man to do wickedly, and he hath given no man license to sin." These words are interpreted in a literal sense by millions who believe that though they have an inherited tendency to sin, yet strive against, and regard sin as inexcusable.

sable. They believe they have free will, and that by its use they may escape even hereditary tendencies. The precepts above given are based on the assumption that man has free will, otherwise they would never have been imposed. This view does not belong to any theological school, but is simple Bible teaching. If we examine the book of Ecclesiasticus simply by the light of literary excellence and ordinary common sense we shall find it full of sound philosophy, and marked by wonderful insight into human character. We wish, *en passant*, we could impress upon the minds of the people the value of chapter xxxviii., on physicians and medicines, beginning: "Honour the physician for the need thou hast of him."

The other view that heredity presses on humanity in suchwise, that men cannot escape from the cruel bondage in which they are held, is not a lovable doctrine nor yet a hopeful one. We are pressed down, say, by the knowledge that our begetters have left us a herity in the shape of the drink crave. It would be a hopeless future if there were no escape from this tendency; and life would become little better than a charnel-house, for the great controlling power over the masses would be lost, and a too ready excuse would be found in fatalism.

Life with all of us is a struggle. Passion is always warring against restraint. Men fall and faint on the way, sinning and repenting, but ever struggling and resisting; striving with the eternal hope held out that, if victorious, they shall be rewarded for their efforts to persevere in the right way. We may take it for granted that men are born who are cursed with constitutions which unfit them absolutely for the struggle of life in all its aspects. The consoling part of this lies in the fact that we witness these men struggling with noble purpose, even against adverse odds, towards a higher life. These two aspects on the moral side of the great question of heredity may be reconciled by the standpoint from which they are taken, and our readers will be able to judge as to their value from the admirable series of papers which have appeared for several months in the *Provincial Medical Journal* on the subject of heredity, from the pen of Dr. DOUGLAS LITHGOW. He has run through the whole subject, showing us how far, as regards disease, heredity plays a part, and he has brought together in reasonable compass and in a readable way the mass of evidence we have to show, that the part heredity plays in disease is a very important and far-reaching one, and that it should not be neglected by the scientific physician; and though patients may be weighted down by inherited diatheses, yet the physician may be able to lift the patient out of his condition, and to place him in an environment where ancestral taints may be corrected and, as it were, replaced. We have to guard against predisposition to disease, and Dr. LITHGOW says (p. 307, July, 1887): "As a general rule, diseases themselves are not inherited, but only those structural or constitutional peculiarities which predispose to them. Sometimes it is true that the predisposition is so strong that it cannot be altered by any change of environment, or by the best directed efforts

to counteract ancestral taints. On the other hand, we have ample evidence to show that by wise direction, latent tendency to disease due to heredity may be kept in check, so that they are inoperative." Dr. LITHGOW's papers should be read continuously. He sufficiently quarters all the field, and how wide it is may be seen from the fact that it extends over so many months of the journal, and he who masters all the details will be better qualified to deal with individual instances of disease occurring in prince or peasant, for to both heredity applies.

"When ADAM delved and EVE span,
Who was then the gentleman?"

IN recent numbers of the *Journal d'Hygiene*, October 18th and 25th, 1888, Dr. PROSPER DE PIETRA SANTA discusses the present state of the question of anti-rabic inoculation. He tells us in a letter to Dr. LA TORRE that he has gone through the literature of the subject since 1879, and with impartiality, but he has been forced by the evidence to make part of *the crowd of obscure blasphemers*, and he has consoled himself with the thought, "*Amicus PLATO, amicus SOCRATES, majis amica veritas.*" From the arguments drawn from patriotism on the one hand, and the glorification of French science on the other, he believed with PASTEUR that *la patrie de la science embrasse l'humanité tout entière*. In giving the views of VON FRISH, JULES GUERIN, and PETER, he did not insist on them so much as on those of H. BOULEY, B. W. RICHARDSON, and BOUCHARD, who, whilst professing a great regard for the illustrious chemist, yet have been compelled by the facts to give the experiments their true interpretation. Dr. RICHARDSON (London) wrote: "*The empirical method of PASTEUR, with only a trace of genius, is wanting in scientific control.*" BOUCHARD, at the Congress at Nancy, spoke with good sense, logic, and wisdom, on the method. "We cannot conceal that there still exist doubts on the mode of action of the vaccine of rabies. This inoculation does not present any analogy with other virus-vaccines, as for chicken and small-pox. In these we have to deal with microbes known, cultivated, and rendered vaccines by laboratory manipulations. They have the same vital quality even in the least quantity. They produce a malady which confers immunity from the first. With the method PASTEUR there is nothing similar—*no attenuation of virus, no known microbe, no malady.* We are, in fact, in *empiricism.*" The opinions of BOULEY are quoted, favourable to many parts of PASTEUR's work; but BOULEY proposed a number of tests, which have not been carried out, so far as Dr. DE SANTA can learn, or if so, they have not escaped the doors of the PASTEUR laboratory. These questions should be answered, as they were so framed as to throw light on many important points in the controversy. They have been shelved on such pleas as want of leisure. COLIN of ALFORT's proposals appear to have met with the same fate, though the means of the Institute have been ample for their solution. Dr. DE SANTA passes from opinions to figures. He tells us that the mean mortality from rabies has been questioned.

It is not known accurately. BROUARDEL adopted the figure of thirty per annum, a figure previously adopted by TARDIEU. But when the Institute of PASTEUR revealed *hundreds* of cases per annum, the figure *thirty* was necessarily said to be too low. BROUARDEL subsequently said: "They only knew of less than half the deaths." One factor in the problem being wanting—it was illogical to state that the deaths in France had diminished. They had returns for 1887 of the Department of the Seine, collected by DUJARDIN BEAUMETZ of 350 bitten persons; 306 followed the treatment, with two deaths; forty-four did not follow it, with seven deaths. At first sight these figures were convincing, but in the 306 no account is taken of the treatment received before application at the laboratory, or of the proportion who escape injury, fixed by M. LEBLANC at one in six, by the London Commissioners at one in five. In place of M. GRANCHER (March, 1886) saying, "Out of 350 persons we have had 350 *successes*," it would have been more just to delete from that proportion (one in six) who would have escaped without the anti-rabic treatment. The figures worked by Dr. DE SANTA stand as follows:—For the mortality of seven in forty-four the formula is:

$$7 : 44 :: 1 : x = \frac{44 \times 1}{7} = 6.28.$$

This gives a mortality of 6.28. Taking some of PASTEUR's large statistics, he reduces them to another formula. In July, 1887, M. PASTEUR had treated 3,339 persons—2,728 bitten by rabid (?) animals, 611 by suspected animals. Out of this number there had been thirty-eight deaths, in the proportion of 1.13 per 100, taking all the deaths. Deducting the proportion of one in six, who would have escaped in all probability, we have the formula:

$$100 : 1.13 :: \frac{100}{5} : x = 20.60.$$

The figure 20.60 per cent. really represents the mortality.

These statistics, which Dr. DE SANTA gives, show how figures may be manipulated. He continues his letter by referring to the opinions of VULPIAN and CHARCOT. VULPIAN said at the Academy: "Rabies, that terrible malady, has at last found its remedy." CHARCOT said: "M. PASTEUR can walk with head on high, and still pursue the accomplishment of his glorious task, without being turned aside a single instant by the clamours of contradiction or the insidious murmurs of ———. Dr. DE SANTA gave the reverse of the medal in the criticisms of MM. J. GUERIN, FAUVEL, and PETER. M. PETER stated that since the discovery of the remedy there have been more cases of rabies, that PASTEUR was not the successor of JENNER, and that the method was to be condemned: (1) On scientific grounds, as it was a strange abuse of language to give the name of vaccination to such inoculations. (2) That the system was *empirical*, accentuated by contradictions—contradictions shown by the fact that a microbe was assumed, which did not exist, an empiricism, by the cultivation not of the microbe but of rabid spinal cords, and in making them pass from one living organism into another living organism—an

empiricism still, when he passed in his inoculations from the organism of the rabbit to that of the dog—empiricism more audacious still when he passed from his experiments on the organism of the dog, before a bite, to experiments on the organism of man, after a bite, from an enraged animal.

M. PASTEUR cannot complain of criticism when he himself had the audacity to say of M. PETER, one of the first clinicians in France, that he was a person clinically and experimentally incompetent to judge. This impatience of criticism is very remarkable in M. PASTEUR's career. All who accept M. PASTEUR's views are, of course, wholly competent, even though they have the most profound ignorance of the literature of rabies. Dr. DE SANTA finishes his report by alluding to the report of the English commission, which did not support the formation of a rabic institution in England, but demanded the application of rigorous police measures.

M. DE SANTA calls to mind M. PASTEUR's felicitation of the action of the Prefect of Police of Paris in his crusade against wandering dogs. He says on this point: "It is singular to see the destruction *per fas et nefas* of the canine race praised by the *savant* who has discovered the means for curing rabies." M. DE SANTA points out another disappointment resulting from a reply of M. PASTEUR to furnish the indications, etc., on the first symptoms of rabies in dogs and cats. M. PASTEUR replied: "It was not possible to define, in an absolute manner, the characteristic symptoms of rabies, as even experts (veterinarians) might sometimes make an erroneous diagnosis." The reply is a dangerous one, because it can be applied to the diagnosis of the condition of the dogs which furnished M. PASTEUR himself so many patients. M. PASTEUR has, in his time, not been unsparing in his criticism of theories with which he could not agree, and he should be the last to appeal *ad misericordiam*. He is amply rewarded by the manner in which the Institute has been supported by the EMPEROR OF RUSSIA and the SULTAN, and the Republic of France. The brilliant ceremony which took place at the opening of the new Institute in the Rue Dutau should compensate him for any criticism he has been subjected to. This ceremony was undoubtedly an imposing one, even though wanting in the support of the *savants* of Germany, Austria, Italy, Belgium, etc. The objects of the Institute, the study of virulent maladies, are admirable. We cannot overlook, the too great prominence given to rabic inoculation, so much so that Dr. HENRI HUCHARD, the famous French therapist, has called the new building the "Palace of Rabies."

The address of M. GRANCHER at the opening of the Palace of Rabies contains a repetition of the fallacy that the mortality is $1\frac{1}{2}$ per cent., which assumes that all who are bitten are in danger of contracting hydrophobia. The mortality in France remains unaffected. The mean annual of thirty deaths, established by statistics from 1850 to 1885, is still kept up. The following table, taken from the *Journal*

de *Medecine de Paris*, November 20th, gives the number of deaths after the PASTEUR treatment during the year 1888 :

	NOMS	Animal et date de la morsure	Date du traitement	Date de la mort
1	N., enfant de 4 ans	Chien 6 déc. 1887	12 décembre 87	22 janvier 1888
2	Sidi ben Israel	Chien	Janvier 1888	18 mars
3	N., femme de 52 ans	— 23 janv.	29 janvier	17 février
4	Marinot	— 15 févr.	15 février	1 avril
5	S., âgé de 54 ans	— 9 nov.	11 novembre 87	3 avril
6	Cotte, 28 ans	—	6 mars 1888	12 avril
7	N., enfant de 6 ans	— avril	5 avril	2 mai
8	Avray, 11 ans	— 12 avril.	17 avril	29 mai
9	Olin	— 23 avril.	26 avril	17 juin
10	Poulet, 29 ans	— 6 déc. 1887	8 décembre 87	12 juillet 1888
11	Bertin, 18 mois	— 15 mai	17 mai	20 juin
12	Villemain, 31 mois	— 9 mai	14 mai	23 juin
13	Labeaume, 37 ans	Chat 29 mai	30 mai	6 juillet
14	N., 28 ans	Chien 10 déc. 1887	12 décembre 87	15 juillet 1888
15	Ducos, 28 ans	Chat 16 juin	20 juin	18 juillet
16	Mesnil, 44 ans	Chat 25 mars.	26 mars	30 juillet
17	Sarazin, 44 ans	Chien 1 juillet	4 juillet	4 août
18	Guers, 27 ans	— 13 juillet	16 juillet	8 août
19	N. (cité par Dr Levraud)	— 15 juillet	16 juillet	20 août
20	Sinardet, 26 ans	— 26 avr. 86.	3 mai 1886	28 juillet 1888
21	Cousinier	— 12 sept. 88	12 septemb. 88	8 octobre 1888

These are the deaths for nine months. If we add to this the mortality of persons who did not seek M. PASTEUR's aid, the figure thirty, the mean mortality, would be reached.

In the admirable address delivered by Sir MORELL MACKENZIE at the inaugural meeting of the British Laryngological Society, November 14th, occurs the following passage: "Throat specialism appears to be even in danger of becoming fashionable, at any rate the number of its votaries has lately been increasing and multiplying with a rapidity which makes one inclined to wonder with ABERNETHY, 'What is to become of them all'?" This observation applies not only to the speciality founded by Sir MORELL MACKENZIE, but to all the specialities; they are overcrowded, and we fear that for some time they will be overcrowded. The specialities will not be crowded by men of ability, but by men even below mediocrity, who, mistaking their vocation, aspire without just grounds to take a position in medicine in what some consider the higher rank. A specialist is supposed to know a good deal more than an ordinary physician or surgeon on the special organ he studies, or rather makes a living by. We have previously written on the subject of specialism, and we have given our views in brief. There are, as we have said before, specialists and specialists: there are specialists who are educated, accomplished physicians and surgeons, besides possessing an exceptional acquaintance with the individual organs they have taken up for study; these men are known to the profession, their work is appreciated, and they themselves are honoured. But there is another class of specialist, a class which has sprung up of late years like mushrooms, who have no qualification for the position they aspire to, and who, having deceived themselves into the belief that they are specialists, have also faculty of deceiving others, in the shape of patients, and making them believe, for a time, that they are far superior to the ordinary physician or surgeon. These men pick up the usual technical expressions, and some of them acquire a reputation by inventing some little contrivance, or by putting a new screw in, or giving a new turn to the invention of some really eminent medical man. The general profession

are not such dullards as not to be able to distinguish a diamond from a pebble, and they are equally fully alive to the diagnosis of the genus we are alluding to. Specialism at the present day needs no defence, and as Sir MORELL MACKENZIE truly says, it is like whipping a dead horse to have to speak in its favour. What is to become of all the budding specialists is a problem which the future alone can solve for us; but there can be no doubt of the future of some of them, if they follow out the advice given by one who is himself a past master in the art of specialism. Sir MORELL MACKENZIE has not said anything new, though he has put his views in a new form. 1. He recommends all throat specialists to practise general medicine or surgery for the first ten years of their professional career, whilst devoting themselves at the same time to their speciality. "In my opinion," he says, "only those who have acted as general practitioners for some years, or who have held appointments as physicians or surgeons to general hospitals, are thoroughly equipped for practising as specialists." The profession will, we think, agree with this advice. It is the neglect of this method of training which has made general practitioners smile at the pretensions of the mushroom class, who have posed before them as their teachers and guides. What applies to throat specialism applies to all the others. 2. The next piece of advice is equally worthy of consideration. He continues "give your attention mainly to pathology and therapeutics, seeking to enlighten darkness and eradicate error in these important matters rather than to the invention of apparatus. One may earn some cheap renown, no doubt, by modifying the mechanism of a snare, or applying the electric light in some slightly novel fashion to laryngoscopy, but an ambition that is satisfied with such triumphs can hardly be called "an infirmity of noble minds." Very true. We regret to say that there is a number of specialists whose only claim to the title is that they have invented some little apparatus which nobody uses but themselves. 3. The last advice is perhaps the best, it is very old but it is true, and is the secret of success in all professions, it is the great gospel of work. "Work stedfastly," he concluded, "whether the subject be recondite or apparently trivial; observe and test everything, and bring your results here to be criticized by your fellow workers." If would-be specialists adopted the advice given by Sir MORELL MACKENZIE we venture to think that in ten years time there would be a very considerable change for the better in the prospect of the specialist. In the first place there would be a very considerable weeding out as men found out their imperfections, and a diminution in numbers appears to us one of the chief desiderata.

Annotations.

"Forsan et hæc olim meminisse juvabit."

WHAT IS SLOYD?

In the wider meaning of the word, according to the *Educational Times*, Sloyd meant any useful handiwork in wood, iron, leather, or cardboard, not executed as an artisan

would execute in. Sloyd has now a narrower meaning, and in Sweden is applied to a system of training the eye and the hand by means of wood carving. Is is a new development of educational training to encourage habits of order, exactness, and industry. It is popular in Sweden, and is likely to become so in England.

THE GILCHRIST TRUSTS.

WE are indebted to the *Educational Times*, of Nov. 1st, for the following history of these Trusts:—

"This Trust is named after its founder, Dr. John Borthwick Gilchrist, a man of unusual energy and versatility of mind, who was born at Edinburgh in June, 1759, and died at Paris in January, 1841. He studied medicine at the University of Edinburgh, and at the age of twenty-three became Assistant Surgeon in Bengal under the East India Company. Here not only had he medical charge of the native troops, but on one occasion, at least, he took the command of a party of them, and successfully repelled an attack by a large body of Pindarees. Feeling very deeply the disadvantages under which he and other Europeans in India laboured, owing to their ignorance of the native languages, he set himself vigorously to the task of acquiring Hindostanee. As there was then no way of doing this except by intercourse with the Hindoos, he obtained long leave of absence from his post, quitted European society, dressed as a native, became at length an accomplished Hindostanee scholar, and by his dictionary, grammar, and numerous similar writings, smoothed the way for other Europeans also to become such. On the establishment of the Marquis of Wellesley's College at Calcutta he was offered the post of Professor of Hindostanee, with a handsome salary, and at once threw up his medical appointment (he was Head Surgeon) to accept it. But at the end of five years his health broke down, and he returned to England in 1804 on a very scanty pension. For a year or two he lectured gratuitously in London, and afterwards in Edinburgh, to gentlemen about to go to India, living mainly by the sale of his books, which, in some years, are said to have brought him in as much as £1,600. At Edinburgh, in 1808, he became a banker, and so remained until 1815, when his business passed to a Joint Stock Company, in which he retained a large holding; and, we believe, it still flourishes as the Commercial Bank of Scotland. Returning to London, he persuaded the East India Company to institute there a Professorship of Hindostanee, which he himself held for several years. Meantime, and for the rest of his life, he "went in" ardently for popular education and other philanthropic movements. He joined Birkbeck in starting mechanics' institutions, and assisted Hume and others in founding what is now University College, London, in which, for a time, he was Professor of Hindostanee. He became President of the London Oriental Institution, and also of the London Gymnastic Society (for he was enthusiastic on the value of physical training), and he projected a National Philological Society, which, among other good objects, was to promote the advantage of the commonwealth 'by a rapid, comprehensive, cheap, but efficient system of juvenile education.' Dr. Gilchrist left the bulk of his property in trust, in the first instance, for the benefit of his wife; but directed that, upon her death, the trustees (five in number) should appropriate the fund, as they should 'in their absolute and uncontrolled discretion' think fit, 'for the Benefit, Advancement, and Propagation of Education and Learning in every part of the World, as far as circumstances will permit.' This disposal of his property was (one might say of course) disputed by his heir-at-law, and the opposition was carried right through to the House of Lords, which finally decided against the appellant,—the main result being (equally of course) that all the costs (some £10,000) came out of the estate. The income from the Trust amounts to £3,500 per annum. The present trustees are R. L. Holland, Esq., Sir Lyon Playfair, Sir Ughtred Kay-Shuttleworth, the Hon. Alfred Lyttleton, and Professor James Stuart, M.P. Their Secretary is Mr. H. A. Papps; and the office of the Trust is at 4, Broad Sanctuary, S.W."

THE EYESIGHT OF SCHOOL CHILDREN.

Too little attention is given to this important subject. Children's eyesight is injured not only by bad light and bad print, but by too long use. Young children who work their eyes for seven or eight hours a day, even under the best conditions, are in a fair way to damage them, while those who are compelled to use them for this period under unfavourable conditions are almost sure to suffer. The mechanism of the eye, perfect though it seems to be, even in the very earliest years, yet requires adaptation, and rest is essential for its perfect development. Use does not strengthen the eyes of young children, though it is true that youth may strengthen the muscles. Mr. J. Abbott, M.R.C.S., of Tunbridge Wells, has just published some hints to teachers, accompanied by test types; and we strongly recommend teachers to avail themselves of the assistance he offers to them. It is important for the future welfare of the children that defects in vision should be found out as soon as possible, so that they may be remedied by correcting glasses. Mr. Abbott's test types will be found equally useful to general practitioners.

THE INCUBUS OF EXAMINATIONS.

WE have groaned for a quarter-of-a-century under the incubus of examinations, though not without many protests from the medical profession. We would seem to be within a possible reach of being relieved from this "old man of the mountain," which has clung to our educational methods with all the tenacity with which, in the tale, he hung to Sinbad. We may now shake him off, thanks to the outspoken protest published in the nineteenth century, and signed by many well-known leading educationalists.

THE AMALGAMATION OF THE DUBLIN SCHOOLS.

THE amalgamation of the Dublin Schools is in the way of completion, though there are yet a few impediments in the way. The night lecture system will be abolished by this scheme, and, we venture to think, greatly to the general benefit of the profession.

ONE THOUSAND CONSECUTIVE CASES OF ABDOMINAL SECTION.

AT a meeting of the Birmingham and Midland County Branch of the British Medical Association, Mr. Lawson Tait brought forward all the operations performed since he published his first series of 1000. In the second series, the results were even more satisfactory than in the first. The general mortality had decreased, and such operations as cholecystomy, hepatotomy, nephrectomy, nephrotomy, and abdominal section for chronic peritonitis were included amongst the satisfactory operations of modern surgery. Borrowing the words of Dr. Thursfield, we may say "that this paper is an epoch-making one in medical science."

WHISKY NOT AN ANTIDOTE TO THE RATTLESNAKE POISON.

DR. A. F. HUDSON writes to the *New York Medical Record*, to correct the false impression that whisky is an antidote to snake poison. He says:—"Having often seen a statement made in the public press, and sometimes in medical journals, that whisky and ammonia were the acknowledged antidotes to rattlesnake bite, I feel it a duty to administer a corrective to the above fallacious teaching. About thirty years ago Professor Weir Mitchell, of Philadelphia, spent over two years in carefully experimenting with the virus of snake poisons. Taking a few drops of the pure virus from the sack of the snake, he mixed it consecutively with alcohol, ammonia, iodine, bromine, mercury and other reputed antidotes, then injected the solution of each into birds, rabbits, dogs, goats, and other animals—when he found that the poison was not altered in its power, but would produce its specific toxic effect just the same as when it was undiluted. He found also that the virus was fatal only to a certain extent, that is, if it took half a drop to kill an animal of thirty pounds weight it would require one or two drops to kill one of sixty to eighty pounds. Its action is immediate, and it kills only when the animal is too small and weak in resistive vitality. It is rare that an adult person dies from the bite of a rattlesnake. The virus of the cobra is more intense and fatal. Several years ago a prominent minister in Philadelphia died from the bite of a young cobra. As a given quantity of the rattlesnake virus is necessary to overcome a certain amount of physical force, it is seldom that such quantity is ever deposited by the snake bite upon an adult person. If a large snake should bite a goat of fifty pounds weight, and soon after bite two children of about the same weight, the goat might die, *but the children would not, for the reason that the goat would receive the largest amount of the virus, when there would be little left to poison the children.* In such a case, whisky being used on the children, *their recovery would be attributed to the whisky, so the friends and neighbours would think they have positive proof of a sure antidote in whiskey.* Here is the fallacy which science alone can demonstrate. If, when whisky is mixed with the poison directly, it is no antidote, how can it become so when taken into the system remotely?

THE ARMY MEDICAL SCHOOL, NETLEY.

IT will be a national loss and a national disgrace if, through any motives of economy, the Army Medical School at Netley should be abolished. At this school some thousands of medical men have been trained, and trained efficiently, for the special and responsible work they have to discharge. The Netley teaching on hygiene has now a historic reputation. The advantage to the soldier, and consequently to the nation, of having at their disposal a body of trained men cannot be overestimated. We trust wiser counsels will prevail, and that the Netley School will not be meddled with.

NURSING.

NURSES are a very patient and long-suffering class; they are content to undergo a process of training which involves long hours of labour, and the performance of medical service which has no relation to nursing duties. When fully qualified many of them are content to accept situations of £20 a year in connection with nursing institutions, whilst they earn for the institution £2 a week. They are not allowed to receive presents from grateful patients other than an article of small value. If they receive a substantial *douceur*, it has to be given to the institution. We are glad to be able to state that there is every prospect of a lightening of the nurses' general position.

FALLEN INTO OBLIVION AND REVIVED.

WE have had an instance of this in the new hæmostatic, Penghawar Djambi. Dr. Norderling writes in the *New York Medical Record* (Oct. 30th, 1888), that this is an old remedy again brought into fashion. The botanical name of the plant from which the drug is derived, is *Cibotium cumingii*, and it is indigenous on Sumatra in the province Djambi, hence the name. It is a tree-like fern, and the parts employed are the fine hairs that surround the base of the leaves and stem. The drug has been used by the natives since times immemorial as a hæmostatic. Fifty years ago Kool, of Amsterdam, wrote about its hæmostatic property; by him it was confounded with the agnus scythicus, known in the sixteenth and seventeenth centuries also under the name of trutel tartareus, which was then thought to be a link between the animal and vegetable kingdoms, a vegetable lamb. This agnus scythicus was, however, derived from another country and another fern. Penghawar is mentioned in Minguel's "Analectica Botanica Indica," No. 34. It was introduced in the Pharmacopœia Neerlandica, 1851, as a hæmostaticum. Dr. Vinke, of St. Petersburg, experimented with the drug in 1854, and his experiments are given below: Two beakers, each holding about four cubic inches, were filled with recently-drawn blood from a plethoric person. The beakers were placed in water, which was kept at a temperature of 100° F. during the experiment. Five grains of Penghawar was put in one of the beakers, and after the expiration of three minutes the blood was transformed into so firm a coagulum that it did not fall out when the vessel was turned upside down. In the other beaker the blood, even after twenty minutes, remained mostly liquid. Ten minutes thereafter, under a room temperature of 65° F., the coagulum with the penghawar was so firm that it with difficulty could be torn asunder with the fingers, and the volume to the surrounding serum was as two to one. The coagulum in the beaker without the penghawar was viscid and easily torn, and was floating in a quantity of liquor sanguinis which was three times greater in volume than the coagulum. Similar experiments with blood from persons afflicted with different diseases gave the same results.

THE ROYAL COLLEGE OF SURGEONS, LONDON.

THE Annual Meeting of the Royal College of Surgeons, like that of many others preceding it, appears to have ended without bringing the Council to terms. The members and fellows have just cause to be dissatisfied that their recommendations have not even been considered. The Council are likely to obtain what they want, but the members and fellows are not likely to submit to be ignored. Vested interests are very powerful, and for a time the Council party may have their own way, but by perseverance the members and fellows will be sure to obtain their rights.

THE AGE OF WHITEWASH.

SOME are inclined to think that the present age might be distinguished by the title of the "Age of Interviewing." Now, we are disposed to dispute this title, and to suggest that it might be as appropriately known as the "Age of Whitewash." History (if there be such a thing, which some deny) tells us, or told us, that at certain periods there lived some men who were distinguished by all the vices that disfigure humanity, and we have evidence, as clear as evidence can be, that these men and women have violated nearly all the ten commandments. Without entering into particulars as to the names of these distinguished historical characters, who up to the beginning of this century enjoyed bad reputations, we may say that the process of whitewashing has been so applied that these men, who were guilty of the various offences against morality and against the ten commandments, have been held up to us as much maligned individuals, and their vices have been shown to be really virtues. We have no doubt most of our readers have heard of Dr. Jeddler, the great philosopher. Now the mystery of his philosophy was to look upon the world as a gigantic practical joke, and as something too absurd to be considered seriously by any rational being. And truly, when we look at some of our modern literature, we begin to think that there is something to be said in favour of Dr. Jeddler's philosophy, and to ask, with the great American poet, "Are things what they seem? What an excellent man Bacon was! Why he even wrote those marvellous plays which Shakespeare so long had the credit for. Who to pity most, poor Shakespeare or Bacon? The latest whitewashing process is that of Mr. Onan. It would appear, according to a writer in the *Provincial Medical Journal* who replied to our article, that Onan was more sinned against than sinning, and that he deserved a great deal of credit for doing the detestable thing which he did, and which was rather a meritorious act than otherwise on his part. Another appears to have taken up the same side, though we admit he says he does not do so with the intention of encouraging Onanism. What a *bouleversement* there is in the medical morality in America of to-day when it separates itself from the general principles of morality! Let us summarise openly some propositions. 1. Onanism, a name for masturbation, is justifiable. 2. Child murder is also justifiable under certain conditions.

Fornication is also justifiable. Medical morality, if for one instant we could accept such propositions, would be an outrage upon humanity. The whole question hinges upon a very narrow centre. We used Onan's name to illustrate a vice which has been held in every age in detestation by the common consent of mankind. A masturbator is an object of pity and compassion, for what reason we will not dwell on, so that the participator in masturbation *a deux* should be an object of pity. There are not two moralities, though we are sorry to say some men try to square them.

THE HONOURABLE ARTILLERY COMPANY.

A WRITER in the *British Medical Journal*, November 10th, expresses his surprise that a medical officer of this company should have joined the Army Medical Reserve "in violation of all vaunted rights and traditions, etc." It will surprise the writer to know that the Prince of Wales, who is Captain-General and Colonel of the Honourable Artillery Company, has proposed that the constitution of the Company shall be so altered as to bring it under the operation of the Volunteer Act, and place it on the same footing as an ordinary Volunteer corps. On Thursday, November 8th, the members held a special General Court, and came to an *unanimous resolution to go under the Volunteer Act*. It will, we trust, now, not be "a shock and surprise" to the writer to find that the medical officer has anticipated the general feeling of the members of this ancient and honourable corps.

New Remedies.

Eseridine.—A new alkaloid bearing this name has been discovered in the Calabar bean. It is said to resemble physostigmine in its laxative action, but without disturbing the cerebral nervous system, although it is an irritant of the spinal cord. The advantages claimed for it over physostigmine are that it is permanent in solution, and is six times less poisonous. It is prepared in a crystalline form; its formula is given as $C_{15}H_{23}N_3O_3$. It is sparingly soluble in ether, in which physostigmine is very soluble. It is only sparingly soluble in water, and for the purpose of physiological experiments has been used dissolved in dilute sulphuric acid. It can be prepared from physostigmine by treatment of the latter with sulphurous acid or grape-sugar alkali, another alkaloid being formed at the same time. Eseridine can also be resolved into physostigmine by suitable treatment with acid. Indeed, it differs from physostigmine, containing only a molecule more of water.

Adonidin.—The varying results that have been obtained by therapeutists with this cardiac remedy, are now explained to some extent by the fact that the adonidin of commerce has lately been found to be a mixture of various other constituents of the plant mixed with adonidin. Dr. Podwissotzky, who has succeeded in separating these, describes adonido-quercitrin, a substance of an orange-yellow colour; adonido-dulcite a saccharine, crystalline body, in beautiful prisms, and adonidic acid, an amorphous brown glucoside. The pure active principle he calls picro-adonidin. It is an amorphous glucoside, having a very bitter taste, and soluble in water, alcohol, and ether.

Cæsium and Rubidium Salts.—Dr. Botkin (*Lancet*, October 13th, p. 734) has recently investigated afresh the action of these salts with results similar to those obtained by Dr. Ringer. He finds that the chlorides of both these metals when subcutaneously injected raise the arterial pressure and slow the heart-beats, this action being dependent

chiefly on stimulation of the pneumo-gastric centre; but at the same time the peripheral inhibitory apparatus of the heart is affected, more particularly by the cæsium salt. The action of the cæsium and rubidium salts, however, present a great similarity to those of potassium; the difference being to a great extent quantitative, the potassium salts being the most active, and the cæsium salts least so.

Cobalto-Nitrite of Potassium has lately been recommended by Dr. Roosevelt as worthy of trial in cases where nitrites are now used. He believes that it causes less discomfort than other nitrites; that it relieves arterial tension, and diminishes the dyspnoea of asthma and uræmia. It has been given to adults in doses of half-grain every two or three hours. To dogs as much as five grains has been given without any injurious effect. The salt is prepared by adding a solution of potassium nitrite to a solution of a salt of cobalt previously acidulated with acetic acid, when a yellow or olive crystalline precipitate is thrown down.

Mercuric succinimide is said to have the advantage over other mercurical preparations, that it does not precipitate albumen or pleuritic or hydrocelic liquids. The strength of solution recommended by Herr Vallert is 1.3 grams. of succinimide in 1000 of water. It causes a smarting pain, to prevent which cocaine is sometimes added, but not in larger proportion than 0.01 gram. to the syringeful; otherwise it causes precipitation. Two parts of the succinimide represents one of mercury. The compound occurs in commerce as a white silky powder, and is readily soluble in water, and forming a clear solution. It is prepared by dissolving mercuric oxide in succinimide, concentrating the solution, and filtering while hot, the succinimide of mercury crystallising out on cooling.

Hedwigia balsamifera. The active principle of this plant, the *bois cochon* or *sucrier de montagne* of the Antilles, has been investigated by Messrs. Gaucher, Combemales, and Marstang. It is a resin which possesses a paralyzing effect, commencing with the hind quarters and proceeding up the spine. At the same time the temperature of the body is considerably lowered and the lungs become congested. The plant also affords an alkaloid in which the paralyzing and antipyretic action are less marked, but which has a distinctly convulsive action.

The physiological action of *Uranium salts* has been reported on by Dr. R. H. Chittenden, in a paper read at a recent meeting of the American Physiological Society. He found that the salts of this metal acted as an irritant poison, producing gastro-intestinal inflammation of greater or less intensity, sometimes amounting only to simple enteritis, and in other cases becoming an acute catarrhal inflammation. Its effect on nutrition is shown by rapid emaciation. It produces also acute parenchymatous nephritis, and toxic doses cause complete suppression of urine; small doses, on the other hand, cause at first an increased secretion. A large amount of calcium oxalate in the urine and glycosuria are marked characters in cases of poisoning by this drug.

Anthracobin has formed the subject of several experiments by Dr. Bronson, who has recorded his experience in a paper read before the American Dermatological Association. In some comparative experiments made with anthrarobin and chrysarobin, he found that if an alkaline bath was first used, and then an ointment of anthrarobin, composed of one part with nine of vaseline, applied locally, it was more effective than chrysarobin; but without a previous alkaline bath, chrysarobin gave the best result. Chrysarobin did not stain the skin so deeply as anthrarobin, but the stain produced by the latter was limited to the area of application. Anthracobin was not found to have any anti-pruritic effect, but did not cause any irritation, except in one case in which a 20 per cent. ointment was used.

Morrhaine.—Some experiments with the recently discovered alkaloids of cod-liver oil, aselline and morrhaine, show that they possess very different properties, aselline producing symptoms of fatigue, shortness of breath, and stupor. Fourteen milligrammes of it were sufficient to kill a greenfinch in fourteen minutes. Morrhaine, on the contrary, possesses the property of stimulating the appetite, and has marked diaphoretic and diuretic powers. Fortunately, it is present in relatively large proportion in cod-liver oil, forming about two-thirds of the bases present in the oil. It is a thick, oily, amber-yellow liquid,

lighter than water, and only slightly soluble in it, yet caustic, and very alkaline to the tongue in its pure state. These bases can be separated by means of their compounds with chloride of platinum, aselline forming an insoluble, and morrhaine a soluble compound. It may thus be possible in the future to administer the active ingredients of cod-liver oil in a more concentrated form, or in cases where the oil cannot be taken without excitation, in a form more palatable and less objectionable.

Helleboreine has been found by Messrs. Venturini and Gasparini to possess anæsthetic properties when the solution is locally injected. It takes place about fifteen minutes after the injection has been made, and lasts for about thirty minutes after a single application. Professor Bufaline, of Vienna, thinks that in ophthalmic operations it is even preferable to cocaine. A solution containing half a milligramme of helleboreine to each drop was used, and three or four drops of this solution were found sufficient to produce anæsthesia. It does not appear to irritate either the conjunctiva or the cornea. The anæsthesia lasts longer than with cocaine; it does not make the eyelids flaccid, and does not affect the state of the pupil of the eye. As it is a powerful cardiac poison, it is dangerous to inject it in the neighbourhood of that viscous.

Periscope.

I.—GLEANNINGS IN MEDICINE.

BY W. B. KESTIVEN, M.D.

Pharmacology (*Der Fortschritt. Genf.*, October 5th, 1888).—*Sabbattia Angularis*.—This plant is, among the inhabitants of the Southern States of North America, and of the Central States, employed in the treatment of fevers. In stages of convalescence it is said to improve the appetite and promote digestion. It is used as an infusion, or as a powder, in doses of from one to four grammes. The plant is a gentian, having a smooth straight stalk bearing a broad corymb of flowers. It blooms in July and August. The fruit is a capsule, containing numerous white seeds. All parts of the plant possess an intense bitter flavour. According to Hunker, besides other substances, it yields small quantities of erythro-centaurin, a principle which Mehn finds present in the erythro-centaurea. The *Sabbattia Elliottæ*, which is related to the preceding, is better known in Europe as "quinine flower." It is employed in ague in the Southern United States, where it was first used during the War of Secession as a substitute for quinine, which then became scarce.

Hemidesmus Indica, the root of a climbing plant of the order Asclepiadaceæ, indigenous to Ceylon and the Indian peninsula, has long been known to American druggists under the name of "nannari root," commonly known as the Indian sarsaparilla, and used as a sudorific, and anti-syphilitic medicine.

Ajowan, or *Anni Fruit*, is derived from an annual that is cultivated in Egypt, Persia, and India, where it is employed as a condiment. The small fruit resembles that of parsley, and exhales, when crushed, a strong odour of thyme, with a pungent aromatic flavour. A crystalline substance, identical with thymol, is also obtainable from it, as also two hydrocarbons—cymene $C_{10}H_{14}$, and thymene $C_{10}H_{16}$ —isomeric with essence of turpentine. A distilled water of Ajowan, reputed carminative, has been introduced into the Indian pharmacopœia.

The Alstonia Barks (furnished from *Alstonia scholaris*) have recently been introduced as a tonic, supplementary to quinine, into the Manillas. The tree is a native of the Philippine Islands, and is now common in Indian forests. Two alkaloids have been separated from the bark, *ditamine* and *ditaine*.

Bulb of Drimia Ciliaris, a plant of the Lily family, indigenous to the Cape of Good Hope, resembling squill in appearance, has been employed as an expectorant and diuretic.

Incineration of Excrement (*Le Progrès Médical*, September 1st, 1888).—A new crematorium has been constructed at Chicago, designed for the combustion of human excrement. The Crematorium is placed in a stone quarry, its summit being on a level with the road. The contents of wagons are emptied from this upper part, on to floors, where they are passed on to the doors of the kilns, whence they are poured over grates, beneath which the flames spread. The ashes fall into receptacles placed beneath. Incineration takes place rapidly. At Milwaukee, U.S.A., the same plan has been for some time in operation. It has been found that the burning of the excrement yielded forty-three per cent. of ashes.

On the Influence of Varnish upon the Skin (*Fortschritte der Medicin*, September 1st, 1888).—Dr. Arnheim observes that it is well known that covering the integuments of an animal with a waterproof varnish will be followed by fatal consequences. The explanation, however, of this fact is not so well known. The usual explanation is that death results from suppression of cutaneous exhalation; the reverse was found to be the case by Ugrjumow and Paschutin. Another explanation is that the effects of varnishing the skin is to cause elevation of temperature and hyperæmia of the cutaneous surface, whereby the secretions are thrown upon the lungs and kidneys. Other explanations quoted by Arnheim attribute the fatal results to the retention of ammoniacal and phosphatic elements in the blood.

On Subcutaneous Injection of Strychnia. By Dr. Naunin, Strasburg (*Fortschritte*, 20th October, 1888).—Dr. Naunin finds that the injection of a one per cent. solution of nitrate of strychnia into a paralysed limb is attended with great benefit. The dose (0.001) being gradually increased for five or six days. An interval of from six to eight days is then made, when the injections are resumed for ten or twelve days. Sometimes a tension of the paralysed muscles is felt, for from half an hour to an hour afterwards, and in cases of an apoplectic origin, severe tenesmus has been noticed. Dr. Naunin has not observed any permanent inconveniences to follow these injections.

A Frequent Cause of Biliary Calculi in Women. By Dr. Marchand, Marburg (*Centralblatt für Gynäkologie*, No. 41).—M. Marchand finds in women's stays, a frequent cause of the formation of gallstones. The pressure exerted by these articles of dress, on the liver is transferred to the gall bladder and its ducts. This pressure is not uniform; it is more constant by day, but decreases at night, or exerted only when the form of the thorax is already altered by pressure. This pressure causes the retention of the bile in the gall bladder. During the daytime the bladder tends to empty itself—in the intervals of digestion, and during the night there is a tendency to refill itself. If the daily evacuation of this organ is prevented, or only imperfectly effected, there is a recurrence of stagnation of bile, and consequent disposition to the formation of gall-stones.

The Induction of Premature Labour in Pregnancy associated with Amaurosis (*Centralblatt für Gynäkologie*, No. 41).—In the concurrence of albuminuria of pregnancy, with amaurosis and amblyopia, Dr. Pooley (in *Journal of American Medical Association*) makes the suggestion that not only should the condition of the urine be ascertained, but that an ophthalmoscopic examination should be instituted whereby morbid changes in the fundus are to be ascertained, and under the existence of which, artificial labour should be induced.

Acute Psychoses after Obstetrical Operations (*Centralblatt für Gynäkologie*, No. 41 and 42).—In three cases of obstetric operations, viz.: ovariotomy and urinary fistula, acute mania followed; in another case, melancholia. In all these cases iodoform had been employed. In the instance of a case of amputation of the uterus, acute hallucinations occurred, which, passing into hebetude, general return of health took place in about a month. The influence of iodoform, however, was here excluded.

Codeia or Morphia (*Der Fortschritt*, Genf., 20th October, 1888).—Dr. Fischer, of Kreuzlingen, Thurgovia, recommends the use of codeia in the place of morphia, as being more certain and less dangerous than morphia. The codeia may be given with greater advantage, Dr. Fischer states, in phthisis and bronchitis, administered in the form of suppositories, or by inhalations, the effects being soothing, without any unpleasant after-consequences. The dose is larger than that of morphia by two-thirds. Codeia has been given in gradually increasing doses in diabetes, as advised by Dr. Lauder Brunton. Dr. Mitchell Bruce, however, is represented by Dr. Fischer as advocating the use of morphia in preference to codeia, one fourth of the dose only being required, and a less pronounced narcotism being induced.

II.—NOTES FROM FRENCH JOURNALS.

By H. R. HATHERLY, M.R.C.S.

Lactic Acid in Lupus (*L'Union Médicale*).—At the Medical Society of Lyons Dr. Rafin exhibited a young patient who had been cured of lupus of the nose by repeated applications of lactic acid. The disease had existed eight years, and when the treatment was commenced the lesions had made great progress, the left nostril being half eaten away, and the interior filled with crusts. At first linseed meal poultices were applied to remove the crusts, and the surface was then repeatedly painted with an eighty per cent. solution of lactic acid. At present the nasal mucous membrane is altered, but there is no longer any ulceration. There was a slight catarrh from the lachrymal duct, which after a slight relapse disappeared, except for a slight

epiphora, which continues. In the wards of Dr. Leon Tripier four cases of obstinate ulceration have already been successfully treated with the lactic acid solution. The action of the acid should be limited to the parts diseased.

Cerebral Localisation (*L'Union Médicale*).—Dr. Boweret has reported an interesting case of total loss of sight caused by the embolic softening of the cortical surface of the inner wall of both occipital lobes. It is probable that the softening resulted from an embolism in the posterior cerebral arteries. Loss of memory and confusion of ideas, which also occur in hemiplegia, may be attributed to cerebral oedema. However that may be, in the case referred to, they can only be looked upon as accessory symptoms, and the important feature to be noted is the sudden and complete blindness immediately following an alteration of the cortical substance on the internal surface of the occipital lobe. This solitary case, in the annals of science, confirms the opinion of Munck, that there exists in this region a centre of communication with the retina. In forty cases observed and published by Seguin in the "*Archives of Neurology*," only four can be considered identical with this, but in each case the lesion only occurred on one side, so that there was never complete blindness, but only hemiopia. If absolute blindness co-existed with a healthy condition of the external surface of the occipital lobe, it would tend to prove that the origin of luminous perceptions must be localised exclusively on the internal surface.

Gastrotomy (*L'Union Médicale*).—Dr. Albertin exhibited before the Medical Society of Lyons a cancer of the œsophagus, for the relief of which gastrotomy had been performed; the patient only survived two days. The *post-mortem* examination revealed very extensive congestion of the lungs.

Thyroidectomy (*L'Union Médicale*).—Dr. Poncet considers that thyroidectomy is a satisfactory operation, which is comparatively simple, although tedious. Since adopting a T shaped incision Dr. Poncet can complete the operation in from forty to fifty minutes, and although extensive incisions are necessary, the patient need not lose much blood. The muscles have to be divided to expose the gland thoroughly. The operation has been condemned on account of the myxœdema, which is liable to follow it; it is however justifiable when symptoms of suffocation are present, and the pressure on the trachea cannot be otherwise relieved. In such cases Dr. Poncet operates irrespectively of the risks of myxœdema. He removes the entire gland, for it is impossible to enucleate a single lobe without a risk of very formidable hæmorrhage, and also because it is only in the deeper parts that the cicatricial tissue which compresses the trachea is found. The operation is immediately followed by aphonia, which may last from four to six months, although the recurrent may not be implicated.

Epidemic Infantile Paralysis (*L'Union Médicale*).—Dr. Cordier gives some interesting details of a group of cases of paralysis. His notes deal with fifteen cases, which taken separately are not especially interesting, but collectively are worthy of notice. All the patients, male and female, were under two and a half years of age, and were attacked in the same manner, and with the same severity. The greater number of patients commenced with high fever, corresponding to the extent of the medullary lesions. One rather characteristic symptom has been noted, which has not hitherto been described by writers on this disease, viz., a profuse perspiration, which was only absent in the four cases which proved fatal. The paralysis was so pronounced as to prevent some of the children from either crying or suckling. One remained during five days motionless and flaccid. In the four fatal cases death occurred at the end of the third day. To this extent the medullary lesions may have been considered invading. Thus this form of paralysis is often fatal, and its danger seems greater in proportion to the earlier infancy of the patient. In all the cases which recovered, the improvement was gradual. To explain the epidemic one must evidently admit a common cause. The infection does not seem to have been the result of any kind of drink or food, as some of the children attacked were at the breast. The cause must be sought for in the action of a contaminated atmosphere on the respiratory organs. The period of incubation must be very short, in some instances not exceeding seven hours.

Infantile Paralysis (*L'Union Médicale*).—Dr. Pierret has for a long time past held that infantile paralysis is an infectious disease, and his opinion is based on anatomo-pathological researches and the study of comparative anatomy. It was he who made the earliest drawings in the laboratory of M. Charcot, to illustrate cases of infantile paralysis. M. Charcot considers the disease to be above all a parenchymatous inflammation, whilst Drs. Roger and Damaschka look upon it as a diffuse myelitis, the former having studied old cicatrised marrows, the latter marrows in process of evolution. Subsequently Dr. Bochefontaine referred to a case of infantile paralysis in a dog. Dr. Pierret in examining

a similar marrow from a young dog, found myelitis with peri-vascular exudation, or the same condition which is found in infectious diseases of the nervous system, in syphilis, small pox, and hydrophobia. M. Mathis has found the microbe of this disease in the dog, although there are some differences between the infantile paralysis of dogs and infants, but it must be admitted that the localisation of a microbe is essentially variable. Amongst the cases recorded by Dr. Cordier, a few presented the syndrome of infantile hemiplegia. Was there always a reaction of degeneration? Dr. Pierret, whilst agreeing with Dr. Cordier on the microbial nature of infantile paralysis, would not like the question to be considered as finally settled. Strictly speaking, such cases might be attributed to a more or less known eruptive fever, in which nervous complications had arisen.

Baby Farming (*L'Union Médicale*).—The French law which regulates baby farming, usually known as Roussels law, is exciting considerable hostility in some departments, the General Councils refusing to enforce it. The following extract from an article by M. J. de Crisenoy, refers to two of the departments which are conspicuous by their opposition to this law: "In the department of Orne, where the nursing industry is considerably developed, more than a third of the children placed out at nurse die, and the most revolting facts have been denounced by the Mayors of L'Ille et Vilaine; the inspector has caused one nurse to be interdicted, in whose house seven deaths had occurred in eighteen months, the ages of the infants ranging from eleven to fifty days; the nurse would have continued her honest trade if the General Council had not intervened. Some nurses and baby farmers kill knowingly and wilfully, their motive being that a dead child pays them ten times as well as a living one."

Abscess of the Lung (*Revue de Médecine*).—Messrs. Spillman and Haushatter claim that an abscess of the lung may sometimes be cured by re-absorption, by emptying itself into the bronchial tubes, or by perforating externally, but such cures are often in themselves an evil; every one recognizes the serious consequences of the opening of an abscess into the pericardium, liver, or of pleuro-pneumonic cutaneous fistula. It more often happens that an abscess of the lung leads sooner or later to septicæmia, marasmus, and death. In view of so unfavourable a prognosis many surgeons do not hesitate to seek for the seat of suppuration, in order to evacuate it without, and so prevent an opening into important organs, and bring about a speedy cure. Before having recourse to operative measures every means of diagnosis must be exhausted, including exploratory puncture; the existence and the site of the abscess must be placed beyond doubt. Messrs. Spillman and Haushatter are of opinion that when an abscess is diagnosed during the course of pneumonia, operative treatment must as a rule be rejected; but, if the pneumonia be cured, and the abscess continue, operative measures, to bring about a rapid cure, or at least to avert the danger of pus finding its way into adjacent organs, are required. Before opening an abscess it is useful to excite pleuritic adhesions if they do not already exist. To reach the abscess, the best method appears to be the resection of a rib and the puncturing of the lung, by a thermo-cautery. The entire evacuation of septic fluids must be secured by means of a drainage tube. Antiseptic washings are to be condemned; they are liable to excite severe paroxysms of coughing, and may even set up fatal bronchitis or broncho-pneumonia; dry and antiseptic dressings are preferable. The pulmonary cavity may be plugged with pledgets of phenicised gauze or cotton wool, dusted with iodoform, with antiseptic dressing on the thorax. In the case of abscess, caused by pneumonia, a complete cure is not only possible by surgical treatment, but is often relatively rapid.

Hereditary Chorea (*L'Union Médicale*).—Dr. Lannois has had occasion to treat several members of the same family for this disease, which does not appear to be frequently met with. Dr. Déjerine refers to it in his thesis "On the heredity of diseases of the nervous system," and Dr. Lannois mentions it in his own thesis on "The nosography of choreas," both in 1886. It is sometimes called Huntingdon's chorea (from the name of the American who first described it), also chronic progressive chorea, chronic chorea with psychic disturbance, and by Eichorst hereditary chorea of adults. Hereditary chorea may be classified with the group of arhythmic choreas, it is a disease of youth and middle age, which from an etiological point of view is characterised by the preponderating and essential influence of heredity; it is a direct and similar heredity, parents transmitting to their children the same form of chorea they themselves suffered from. On the other hand, the ordinary chorea of Sydenham occurs in subjects whose progenitors were victims of hysteria, epilepsy, Basedow's disease, insanity, or other dissimilar neuropathic conditions. In respect of symptoms, hereditary chorea is not unlike the common chorea of Sydenham, from which however it may be differentiated by the fact that the non-coördination of movements can be temporarily controlled by an effort

of the will. A certain number of facts, lumped together under the name of chorea of adults, or chorea of the aged, should more correctly be referred to hereditary chorea. The diagnosis offers no serious difficulty. It must not be confounded with other forms of arhythmic chorea, with multiplex paramyoclonus, and above all with convulsive neuralgias. The disease is slowly progressive, and only ends in death. In the present state of our knowledge, hereditary chorea is incurable.

Hot Water Injections in Cancer of the Neck of the Womb (*France Médicale*).—M. de Tornery sums up the advantages of this method of treatment as follows:—1. Injections of hot water at a temperature of 39°–40° centigrade, continued for at least half-an-hour, and applied twice a day, morning and afternoon, disinfect the vagina well, and in cleaning it reduce considerably the ichorous discharge. 2. The injections diminish remarkably losses of blood, and a great improvement in the general condition is the result. The well-known hæmostatic action of hot water sufficiently explains the arrest of hæmorrhage. 3. In the majority of cases pain is diminished, and hypodermic injections of morphia, of which the evils have already been pointed out, become superfluous. M. Tornery also observes that in many cases the progress of the disease is retarded.

Turpentine as a Local Remedy for Epistaxis (*L'Union Médicale*).—Dr. Ernye has employed pure essence of turpentine, although he admits that its dilution would diminish the local irritation it produces. It is sufficient to saturate a small tampon, which is then introduced into the nostrils. A case of profound anaemia, following repeated attacks of epistaxis, which had resisted all other treatment, yielded to the insertion of three tampons into the nasal fossæ.

M. Laborde on the Toxic Effects of Alcohol (*L'Union Médicale*).—M. Laborde has made a first communication to the Academy of Medicine on the researches he has been making in conjunction with M. Magnan, on alcohol and its poisonous properties, on higher class alcohols, and artificial bouquets. It is eighteen years since, in 1869, M. J. Bergeron raised a cry of alarm, and drew attention to the frightful ravages produced by alcoholism. Since this time the scourge has progressed in a constant ratio, and to the dangers of alcohol may be added the dangers of adulterated wines. There is no more difficult question than that of alcohol, or rather of the alcohols. In the present day, enterprise, aided by chemistry, adds (or substitutes) to natural products compounds which resemble the flavour, but which are dangerous. The substances which have been examined number sixty, but there are others employed also. It is possible to manufacture now all kinds of wine, which have the chemical composition and all the appearances of the best natural wine; afterwards the desired flavour is given; the perfume is given by means of a few drops of a fluid known as oil of French (or German) wine. These artificial flavours are very complex products of ethers, which have been studied by M. Girard, Director of the Municipal laboratory; they are obtained by the action of nitric acid on oil of cocoa, or cow's butter, and divers fatty substances. The "oil of French wine" injected into the veins of a dog, in a dose of from four to eight centimetres, in twenty-five minutes produces first contraction of the pupils, then repeated vomitings, changes in respiration, with cries and sobbings, the temperature is lowered, and death is occasioned by collapse, at the end of an hour. The "oil of German wine," which is more extensively used because it is cheaper, acts as energetically at half the dose; it produces hurried respiration, salivation, dyspnoea, and death within an hour by arrest of respiration, although the heart continues to beat a few minutes longer. In each case the poison acts first on the nervous, then on the respiratory system. The convulsive symptoms and epileptic seizures which are observed in certain acute cases of alcoholic poisoning are not due to the alcohol itself but to superadded products. Thus Paul Bert and Fienzal have noticed that accidents are not uncommon amongst the Irish peasantry, who consume the residuum of the distillation of grain, which they are able to obtain for the modest sum of one halfpenny. In these corn spirits may be found pyridine, pyromucic aldehyde or furfural, and salicylic aldehyde, and it is to these two last that convulsive symptoms are due. Furfural is probably formed by the saccharification of bran by sulphuric acid. If one or two centimetres are introduced into the vein of a dog, plaintive cries follow, cardiac and respiratory movements become slow, then epileptic attacks with their normal phases, tonic and clonic with stertor. At this dose the animal may survive; a little stronger dose and it dies from arrest of respiration. An autopsy reveals sanguineous effusions in the meninges, pons, kidneys, liver, and lungs, etc. If four cubic centimetres are introduced into the stomach of a dog weighing six kilogrammes, symptoms of vomiting are produced, the animal falls on its side, howls, there is a retard, and in half an hour an arrest of respiration, the heart still continues to beat for a few moments, then also stops. It would seem that furfural has a pre-dominating action over the pneumogastric plexus, and produces

convulsive effects which do not belong to alcohol. Liqueurs are not now, as formerly, the products of the distillation of brandy, in conjunction with certain fruits. Bad alcohols are used for their manufacture, and essences are afterwards added to mask the disagreeable taste which very inferior qualities of alcohol possess. Amongst these perfumes or bouquets some are almost harmless, but they are the least numerous. The type of these liqueurs is absinthe, of which the disastrous effects have been studied by M. Magnan. Vermouth and bitters are manufactured by means of a very poisonous bouquet, endowed with an agreeable smell, and the extract of the essence of the "queen of the meadows," salicylic aldehyde. Injected into the veins of a dog weighing twelve kilogrammes, at the weak dose of one half centimetre, this substance will cause convulsions, trismus, epileptiform seizures, followed by deep inspirations, the temperature (per rectum) is raised, and collapse with anæsthesia follows. The animal may recover, but if the dose is one centimetre, death follows by asphyxia. This proves that those who drink Vermouth or bitters are liable to epilepsy, like drinkers of absinthe. In the preparation of these liqueurs, salicylate of methyl is also employed, a liquid which produces convulsions, although not of an epileptiform character; there is at the same time muscular rigidity, and a trembling like a vibration. Death follows these phenomena.

III.—NOTES FROM RUSSIAN, POLISH, AND SWISS JOURNALS.

By VALERIUS IDELSON, M.D., BERNE.

Chlorate of Potassium in Diarrhœas.—In the Moscow monthly *Novosti Terapii*, September, 1888, p. 311, Dr. Ivan Mitropolsky asserts that chlorate of potassium, administered internally in small doses several times daily for one or one and a half days, infallibly arrests "obstinate diarrhœas in patients exhausted from chronic disease, or in maranthic subjects generally." Further, the remedy is said to prove equally beneficial in "elderly people with weakened digestion of an obscure causation, who are subject to painless persisting diarrhœas, appearing in connection with mental emotions or unwonted straining exercise." Dr. Mitropolsky recommends the following formula:—*Rx.* Decocti althææ 3 vi.; chlorati potassæ 3 ss. to 3 j.; tincturæ opii simp. *R Ph. Ross.* gtt. xii. to xx. M.D.S. A tablespoonful every two hours. A course of two or three days' duration is said to inhibit maranthic diarrhœa for a week or more. [Tinctura opii simplex *Ph. Rossicæ* contains 10 per cent. of opium. Dr. Mitropolsky says nothing concerning toxic properties of the drug, to which Professor Abraham Jacobi, of New York, drew attention repeatedly in 1860, 1876, and 1879, as well as in 1888 (*vide the British Medical Journal*, September 22nd, 1888, p. 652), and which are powerful enough to justify Professor V. A. Manassein's advice, "to altogether discontinue any internal administration of the drug; for," he adds, "generally speaking, there do not exist any serious or firmly established indications for its use in that way."—*Vide* a report on the toxicology of KClO₃ in the *Provincial Medical Journal*, March, 1888, p. 135.—*Reporter.*]

Ichthyol in Erysipelas.—In the *Novosti Terapii*, September, 1888, p. 328, Dr. A. Korsünsky says that he has used ichthyol in ten cases of erysipelas, and that with very gratifying results. In four of his six cases of bullous facial erysipelas, redness and swelling subsided, and desquamation commenced, already on the third day of the treatment (on the fifth of the disease). In the fifth case, the same occurred on the fifth day. In the sixth case alone, where migrant erysipelas existed, resolution ensued not before the end of the fourth week. As to four cases of erysipelas of limbs, recovery took place either about the third or the fifth day of the treatment. In every one of the ten cases, ichthyol was employed in the shape of an ointment, made of equal parts of the drug and vaseline or lard. The affected parts, as well as a healthy zone around them, were painted with a thickish layer of the ointment twice a day, and then, on each occasion, covered with a thin sheet of hygroscopic cotton wool and a mask (in facial cases), or compress with a roller (in those of erysipelas of extremities). The only drawbacks of the treatment, according to Dr. Korsünsky's experience, are an unpleasant odour, which much annoys the patient, and impregnates the ward's air; and, further, uncleanness, the drug soiling linen abominably, from which it is removed by washing by far not very easily.

[The ichthyol treatment of erysipelas has proved to be similarly satisfactory in the hands of Drs. Bylieff, Sorokin. S. Prëobrajensky (*The St. Louis Medical and Surgical Journal*, August, 1888, p. 109), V. L. Jadkevitch (*ibid.*, September, p. 173), etc. Meanwhile, Dr. F. Milëeff writes in the *Novosti Terapii*, August, 1888, p. 295, that having tried ichthyol in the case of a girl with facial erysipelas, he utterly failed to make the slightest impression on the progress of the disease, and that in spite of his having been assiduously painting the parts affected three

times daily for several successive days, with a mixture consisting of two drachms of the drug, two drachms of sulphuric ether, and half an ounce of collodion. The process steadily progressed from day to day, to end in resolution spontaneously about the thirteenth day of the disease. In addition, while remaining wholly ineffective, ichthyol at the same time fully excluded the possibility of the employment of any other local means, since the mixture on drying formed an extremely firm adherent layer.—*Reporter.*]

Sulphurated Turpentine-Oil as a Cheap Substitute for Ichthyol.—In the Tchernigov weekly *Zemsky Vrach*, No. 4, 1888, p. 60, Dr. P. Evsëenko draws attention to the fact that ichthyol and sulphurated turpentine-oil are closely related, both in regard to their chemical composition and biological action. Basing his assertions on extensive clinical observations of his own, the author declares that these old "Dutch drops" act not only identically with, but in certain cases even more energetically than, Unna's ichthyol in all affections where the latter may be indicated. Thus, Dr. Evsëenko used the oil with excellent results externally in rheumatism, facial erysipelas, eczema of cheeks or genital labia, brachial neuralgia, and internally in gastro-intestinal catarrh, etc. Externally, the oil may be administered either *per se*, or in salve, or in an ethero-alcoholic solution. The pure oil, however, acts best. Internally, he gives it from five to ten drops in a wineglassful of water, three times a day. It is borne by the stomach perfectly well, and even cures gastric disturbances of certain forms. Dr. Evsëenko emphasizes that the old preparation in question is at least ten times cheaper than Unna's remedy.

[*Oleum terebinthinæ sulphuratum*, or *oleum lini sulphurato-terebinthinum Ph. Rossicæ*, consists of one part of ol. lini sulphuratum and three of ol. terebinthinæ depuratum. The ol. lini sulphuratum *Ph. Rossicæ* contains one part of sulphur to six parts of linseed-oil.—*Rep.*]

Professor Rydel on 1,000 Extractions of Cataract.—In the Polish weekly *Przeglad Lekarski* (pron. "Psheglond Lëkarskee"), No. 15, 1888, Professor L. Rydel, of Cracow, in Austrian Galicia—one of the most eminent modern Polish or even Slave ophthalmologists—says that during the period of 1869-1888 (April 6th) he has performed in his clinic 1,000 extractions of cataract, beside 263 other cases of the disease, operated upon in other ways (mostly discision). From 1869 up to the end of 1885, he has been practising Graefe's method of extraction, the total number of the operations of the kind being 796, of which 759 were successful, but thirty-seven (4.65 per cent.) failures—that is, ending in the loss of the eye. Since January 1st, 1886, Professor Rydel has been employing a peripheral flap method, with iridectomy. Of 204 cases operated upon in this way, 197 proved successful, and only seven (3.43 per cent.) failures. The superiority of the latter method becomes still more obvious, if we add that of 118 cases operated upon from January 1st, 1888, up to April 6th, in one only the eye was lost, the remaining 117 being fully successful.

Cocaine in Ophthalmic Surgery.—In the *Przeglad Lekarski*, Nos. 47 and 48, 1887, Dr. Boleslaw Wicherkievitz (pron. "Vikherkëvitch") writes that in his early practice he happened to observe (in common with Bunge) superficial, and even parenchymatous, corneal opacity occurring in such cases where cocaine had been instilled into the eye rather frequently and somewhat long before the operation. Those very unpleasant accidents, however, ceased to recur altogether when he commenced to employ a 5 per cent. solution of the alkaloid just before the operation, and to instil it not more often than twice in each case. Later on, Dr. Wicherkievitz gave up the instillations, and began to anæsthetise the eye solely by means of the sub-conjunctival injection of a 3, 4, or 5 per cent. solution of the drug. The injection should be made ten minutes before the operation. Its pain-killing effects are said to last fifty and even sixty minutes, while on the instillation of the same solution into the conjunctival sac the tissues become again sensitive already within a few—certainly not less than in ten—minutes. The number of punctures and the amount of the solution to be injected vary according to peculiarities of individual cases. The author, however, never yet found it necessary to introduce more than one and a half (Pravaz) syringefuls of a 5 per cent. solution. In cases of iridectomy, extraction of cataracts, etc., he raises a fold of the conjunctiva with a pincette, and then slowly injects the fluid into its base. When he has to extirpate the bulbus, he makes injections along all the four mm. recti, at several points about each; while in cases of excision of sub-conjunctival or orbital tumours, he introduces the solution not only under the mucous membrane, but also into the orbital cellular tissue, and even into the tumour itself. Having resorted to this mode of cocainisation in upwards of 100 cases, Dr. Wicherkievitz never yet met with any alarming toxic symptoms, and only thrice observed short-lasting facial pallor and perspiration, with general weakness. In one male patient, however, one-sixth of a syringeful of a 2 per cent. solution rapidly gave rise to yawning, cold perspiration, and swoon; but even here the symptoms swiftly passed away after a few whiffs of amyl-nitrite.

Bacterio-Chemistry of the Tubercle-Bacillus.—At the Solothurn meeting of the Schweizerische Naturforscher-Gesellschaft (August 7th, 1888), Dr. Hammerschlag has read an interesting paper (*Correspondenz-Blatt fuer Schweizer Aerzte*, October 1st, p. 604) on his bacterio-chemical researches concerning the tubercle-rod, and carried out in Professor Nencki's laboratory in Berne. The first series of his experiments was devoted to the elucidation of the point under which conditions the microbe could be best cultivated wholesale. It appears that the bacillus grows very well in Nocard-Roux's nutritive medium, in a 5 per cent. glycerine pepton agar, and a 5 per cent. glycerine pepton bouillon. The first growth becomes marked on the fourth or fifth day in the agar mixture, and about the seventh or eighth in the bouillon; in both, a fairly abundant growth is obtained by the end of seven or eight weeks after the inoculation. Glycerine may be successfully replaced by mannit or glucose, the sodic salts by the potassic; but when pepton is substituted by tyrosin, the cultivation becomes impossible. The best nutritive medium, however, is a decoction of yeast mixed with 5 per cent. glycerine. Even in four or five weeks after the inoculation, a luxuriant culture is obtained, which consists of large, viscid, firmly matted together clumps swimming in the lower strata of the medium. A series of analyses of the bacilli showed that they contained 88.82 per cent. of water and 11.18 of dry residue. The latter gave as much as 22.7 per cent. of substances soluble in alcohol and ether, while the remnants (after the treatment of the said residue with alcohol and ether) yielded 8 per cent. of ashes, 51.02 of carbon, 8.07 of hydrogen, and 9.09 of nitrogen. The most striking feature represents a relatively very large proportion of substances soluble in alcohol and ether. In this regard the tubercle-microbe seems to stand yet alone amongst all other bacteria examined chemically up to the present. Having undertaken some experiments with the said ethereo-alcoholic extract in animals, Dr. Hammerschlag came to the conclusion that it contains a toxic substance endowed with a tetanic action. This point, however, requires further researches, since up to the present time the author has been unable to isolate the active principle in a more or less pure state.

On Infectious Fevers Attacking the Same Subject *Coup sur Coup*.—At a recent meeting of the Société Médicale Neuchâteloise, Dr. Cornaz sen. communicated (*Revue Médicale de la Suisse Romande*, September 20th, 1888, p. 563) three cases, lately seen by him, where an acute febrile exanthema had been rapidly (*coup sur coup*) followed in the patient by another attack of the same disease, or by another acute febrile infectious affection. One of the cases refers to a little girl who passed through two attacks of measles within a couple of months; another to a boy in whom measles were immediately followed by varicella; while in the third case, three children belonging to the same family fell ill with scarlet fever a few days after their recovery from measles. Having glanced over international literature on the subject, Dr. Cornaz found the following *coup sur coup* combinations: scarlatina—measles; scarlatina—varicella; measles—varicella; measles—scarlatina—varicella; measles—vaccinia; vaccinia—varicella—measles; measles—small-pox; scarlatina—small-pox; varicella—small-pox; small-pox—miliaria.

[A rich mine of facts concerning the subject may become accessible in a couple of minutes through Dr. R. Neale's invaluable "Medical Digest," Section 73: 6; 75: 2-4-5; 77: 2; 78: 1; 82: 5, etc., etc.—*Reporter*.]

IV.—OBSTETRICS.

WE are indebted to the *Journal of the American Medical Association* for the following account of a discussion on Puerperal Fever which took place at the meeting of the State Association of New York.

The discussion on *Puerperal Septicæmia* was introduced by Dr. C. C. Frederick, of Buffalo, who stated that as the danger of infection in any case was in direct proportion to the avenues of approach left open for the invasion of sepsis, the importance of prophylaxis was evident. The strictest antiseptic precautions, he thought, should be observed in every case of labour, and among the measures that he advocated was the use of a vaginal douche of bichloride solution, (1 to 3,000) before delivery. The placenta should always be removed with the patient on her back, in order to prevent the ingress of air which was likely to take place if she was in Sim's position. After the delivery the perineum should be examined, and sutures applied if there was any rupture. If for any reason it was necessary to introduce the hand into the uterus, an intra-uterine injection of bichloride solution (1 to 4,000) should be subsequently employed. He advocated the use of the antiseptic pad, and thought post-partum vaginal injections were unnecessary. When the bowels or bladder were evacuated the patient should be raised to the upright position, in order to drain the uterus and vagina.

As regards the prognosis of puerperal fever, the purely septic forms were the most dangerous, unless the conditions were promptly and thoroughly treated. When septic germs had once gained entrance into the blood and the lymphatics they were beyond the reach of the physician; but further infection could usually be prevented, and if the patient's strength could be kept up, the hope might be entertained that the poison would be eliminated from the system. He regarded the putrid lochia as one of the most potent causes of sepsis.

When septicæmia declared itself vaginal injections of bichloride solution (1 to 2,000) should be employed at intervals of from three to six hours, according to the urgency of the symptoms; and after the use of the douche the patient should be required to sit upright for a moment, so as to drain the parts. All necrosed patches in the genital canal should be touched with a mixture of persulphate of iron solution and compound tincture of iodine, as recommended by Lusk, and if there are any diphtheritic patches, the chloride of zinc should be employed, as advocated by Garrigues. Dr. Frederick thought it probable that the intra-uterine douche had been resorted to too frequently, and that the real benefit in most cases when it was used resulted from vaginal irrigation. Among the dangers likely to arise from this practice was one that had been overlooked, viz., that of conveying septic material from vagina into the cavity of the uterus. If the intra-uterine douche were deemed necessary, the patient should be placed in the lithotomy position, and from one to three pints of bichloride solution (1 to 4,000) carefully injected. Afterwards the uterus should be squeezed dry, a pencil of iodoform inserted into its cavity, and a dose of ergot administered to insure contraction. In controlling high temperature antipyryn, and preferably antifebrin, was frequently of service.

The first question propounded. *What facts can be cited in support of the doctrine that the puerperal febrile disease owe their origin to the action of micro-organisms?* was discussed by Dr. H. M. Biggs, of New York. He said that the natural resistance of the tissue must first be overcome before septic germs could obtain an entrance, and in the normal parturient woman the lochial discharge and the abundant secretions of the parts continually protected the wounded surfaces. The uterus was also kept tightly closed by its own contractions, and the epithelium of its cavity occluded its orifices with an impenetrable shield. If, however, anything occurred to diminish the quantity of the lochia—if the uterus did not contract properly, if the vital resistance of the tissues are not reduced by depressing influences of any kind, or if portions of membrane or blood-clot were retained in the uterus, and if under any of these circumstances microbes were introduced, it was evident that the most favourable conditions for the development of puerperal septicæmia were present.

With these points in view, it was easy to understand how the use of antiseptic precautions was so efficient in preventing this condition. If, in the first place, an antiseptic vaginal douche was employed during and immediately after labour, and if, in the second place, an antiseptic dressing were kept applied after delivery, impaction was much less likely to occur than if these measures were not resorted to, and if it did not occur, it was apt to do so at a later period, when a better opportunity was afforded for counteracting its effects. The different conditions met with in different cases explained the various forms of puerperal septicæmia met with. After death pyogenic organisms had been met with in the milk-glands, in the lymphatics, and in the various organs throughout the body, and it had been demonstrated that they were eliminated during life by the kidneys and other emunctories. The *streptococcus pyogenes* was found in a large number of cases, and it was probable that this microbe was identical with the *streptococcus* of erysipelas. The next most common bacillus met with was the *staphylococcus*, the ordinary microbe of supuration.

The puerperal febrile diseases were, therefore, a class of affections closely allied to infectious surgical diseases. The bacilli of the latter were known to be capable of producing all the conditions met with in puerperal septicæmia. The abolition of the latter from maternity hospitals constituted one of the most remarkable chapters in the history of bacteriology, and hence the conclusion could not be avoided that these diseases were of bacterial origin.

The second question was, *Is there a specific febrile disease peculiar to the puerperal woman, or are the various forms of puerperal fever the result of septic or putrid infection similar to or identical with that familiar to surgeons as septicæmia?* *What etiological relations exist between the zymotic diseases and some forms of puerperal febrile diseases, and in what manner are the zymotic modified by implantation upon the puerperal state?* It was discussed by Drs. E. D. Ferguson, of Troy, and S. B. W. McLeod, of New York. Dr. Ferguson said that he had no hesitation in answering the first part of this question in the negative. In our present state of knowledge the theory that puerperal fever is a specific disease seems no longer tenable, and at the last

important discussion on the subject of this country, viz.: that before the New York Academy of Medicine in the winter of 1883-84, the only participant who advocated the specific character of the affection was Dr. Fordyce Barker. When fever occurred *ante-partum*, as was undoubtedly occasionally the case, it was more reasonable to suppose that it was due to some of the causes which might give rise to pyrexia at any time, rather than to specific puerperal fever without any anatomical basis.

As regards the second part of the question, he said it could be shown that pregnancy did not afford immunity from any of the zymotic diseases. It was necessary to distinguish between those cases in which the zymotic disease complicated the puerperal fever, and those in which the zymotic infection gave rise to the puerperal fever. With regard to diphtheria, he desired to enter a protest against regarding every case of membranous exudation as one of true diphtheria. The zymotic diseases were apt to be more or less modified by implantation on the puerperal state, and the mortality was often increased, especially when pelvic inflammation was present. The diminution of the red corpuscles and the increase of fibrin in the blood resulting from pregnancy might perhaps explain to some extent the greater severity of the zymotics, as a rule, in parturient women. In cholera, however, the mortality was apparently not increased in pregnant women. Small-pox was noted for its mortality in this class, the death rate ranging from 20 to 40 per cent. It frequently caused abortion, which was apt to be followed by the death of the patient; and the same was true of scarlatina and measles. The relation between erysipelas and puerperal fever had long been well known. This disease was not so fatal, however, if care was taken to avoid infection of the genital tract.

Dr. McLeod said in the course of his remarks that it might in general be stated that puerperal fever was a complex disease, depending on a variety of causes, although dependent in most cases on surgical septicæmia. The test of treatment, as shown by the remarkable success of antiseptic midwifery, conclusively proved this.

Drs. F. W. Ross, of Elmira, and John Shardy, of New York, discussed question 3: *What conditions of the woman predispose to the development of puerperal septicæmia? To what extent are the accidents of childbirth, together with the manipulations of the accoucheur, to be considered as etiological factors in puerperal infection? Are there any antiseptic measures before, at, or after labour, under any and all conditions or complications, that may be relied upon as prophylactic to puerperal septicæmia?* Dr. Ross said no iron-clad rules could be laid down for prophylactic treatment, but the observance of certain measures, with due regard to the condition and surroundings of the patient, would, in general, be of service. In the first place, the woman should be placed in the most perfect health attainable, both general and local, before her confinement. At the time of labour she should have plenty of pure air, and all things about her should be scrupulously clean; efficient antiseptic solutions being employed to secure this end. If the perineum were ruptured, either sutures should be put in or antiseptic protection afforded to the parts. Antiseptic injections might be judiciously used, if called for, before, during or after labour.

Dr. Shardy said that one of the most important predisposing conditions was a lowered vital tone; and this view was supported by the bacterial origin hypothesis, because it was well known that healthy tissues constitute the great barrier against microbic infection. The primary channel of infection was the genital tract, and experience had taught the advisability of making infrequent vaginal examinations.

The question, *What is the pathology of each of the several forms of puerperal septicæmia? What conditions or circumstances incident to puerperal septicæmia, and what forms of the disease, tend to render it fatal?* was discussed by Dr. Frank Graer, of the Carnegie Laboratory. Drs. Wm. T. Lusk, of New York, and R. L. Banta, of Buffalo, discussed the question, which was as follows: *What plan of antiseptic treatment can be employed with a large degree of success in each of the several forms of the disease? Does every rise of temperature above 100° F. in the puerperal woman constitute an indication for immediate resort to irrigation? When should irrigation be intra-vaginal and when intra-uterine? When irritation is employed, how often should it be done, and when should it be discontinued? What hygienic, medicinal and dietetic treatment is to be used, in addition to the local antiseptic measures? To what extent should alcoholic stimulants and antipyretics be used?*

Dr. Lusk said that in the midwifery of the future there was reason to believe that there would be no occasion whatever to discuss the treatment of puerperal septicæmia. In his opinion this condition ought never to follow a properly conducted labour. In the Emergency Hospital in New York, where the number of confinements averaged 220 annually, the mortality from puerperal septicæmia, had been reduced to *nil*, and it was actually the case in the present day that

the women confined in lying-in institutions fared better as regards this affection than private parents surrounded by all the aids that wealth can command. The very fact that a place was given to such a discussion as this on the programme of the Association, showed, indeed, that a necessity and efficacy of preventive treatment were not yet as fully appreciated by the profession at large as they ought to be; and he could not but believe that one reason why this was so was, because when antiseptic prophylaxis first came in vogue it was taught that the removal of the carpet, upholstery, etc., from the chamber, and other such extreme measures, were required, and the difficulty of carrying out such a plan of procedure, which was altogether unnecessary, had proved a stumbling-block to many practitioners.

In the first place, both the physician and the nurse should understand the necessity of surgical cleanliness, and soap and water and corrosive sublimate be the means by which this could best be obtained. The hands and forearms should be washed with bichloride solution, just as if laparotomy were to be performed, and the patient's genitals, abdomen and thighs should also be bathed with it. Vaginal injections with the bichloride solution during labour are a valuable safeguard against self-infection. All unnecessary manipulations, such as attempts to dilate the cervix with the fingers, should be avoided. The complete removal of all the membranes should be carefully looked to in the third stage of labour, and Dr. Lusk said that in order to secure this he always employed a strong light so that he could readily see what he was doing. If it was necessary at any time to introduce the hand into the uterus the cavity should be afterwards washed out with a solution of carbolic acid.

To prevent germs from entering the tissues to dangerous extent, nothing, he said, would seem, at first sight, so efficient as irrigation; but uterine irrigation was not devoid of risk, and this method of procedure really left out of account the great bulk of puerperal inflammations. Experience had shown that if the uterine douche were employed regularly at a few hours interval the mortality would be considerable. It was a point worthy of note that a rise of temperature did not constitute at all the indication for a resort to uterine irrigation. The true indication was a large, flabby uterus, with retained membranes, portions of placenta, or blood-clots.

In using the uterine douche a glass tube was preferable, and carbolic acid solution was the most satisfactory fluid for the purpose. It should be preceded by a vaginal douche, and the quantity of fluid employed should not be large—never exceeding two quarts. The stream should be continuous, and not interrupted. It was important that a free exit for the fluid should be secured, and after the douche had been finished pressure should be made upon the uterus to facilitate contraction and the expulsion of any of the solution that might remain in the organ. He had found it a good plan to have a pencil containing a drachm and a half of iodoform in the cavity of the uterus. The mistake was often made of resorting to the uterine douche too frequently. It was his practice to give a second douche at the end of twelve hours, if it was required; but a third was rarely needed. Dr. Lusk stated that he still had faith in the efficacy of the vaginal douche in almost all the varieties of puerperal fever, as it certainly promoted uterine contraction, and was generally very agreeable to the patient.

In every case of increased temperature after parturition the first thing to do was to make a careful examination of the vulva and vagina, and if ulcerations were found to apply caustic. The use of ice-bags on the pelvic region was generally of service. The chief danger in puerperal septicæmia was from weakness of the heart's action, and this was to be counteracted by alcoholic stimulus, abundant liquid food, and such agents as strophanthus. In all cases of fever following parturition suitable nourishment and alcohol were indispensable. The most careful attention to the hygienic surroundings of the patient was, of course, called for. In the severest cases the ice-coil was undoubtedly useful, and Runge had recently reported very favourable results from the employment of tepid water in lymphatic septicæmia. These results were the more remarkable from the fact that this was the most fatal variety of puerperal fever, and the method was certainly worth trying.

V.—NOTES FROM EGYPT.

By J. A. S. GRANT BEY (Cairo).

The Sanitary Condition of India and its Teaching.—In our last article we gave an account, by an eye-witness, of the normal sanitary state of a native hamlet in the suburbs of Calcutta, while no epidemic was raging. We now purpose to lay before our readers an account of a visit in December, 1887, to a native cholera-stricken village, also on the suburbs of Calcutta, in order that we may profit by the sad narrative. The epidemic here described is only part of that cholera epidemic which has been spreading over the length and breadth of India since last year, and which is now raging in all its intensity in

the Punjaub. As all our readers know, India is the hot-bed of cholera, where it is always present in its endemic form, and where every three or four years it assumes the epidemic character, when it threatens to spread not only over India, but to every post having communication with that country.

¹ "The destroying angel passing over the land of the Pharaohs, and smiting the first-born in every Egyptian household, cannot have produced a more heart-rending scene than the one now presented on a smaller scale at Hathebagan, a suburban village, not more than a quarter of a mile from the centre of Calcutta. There, within an area of small compass, more than twenty families are each bewailing the death of some member or members of their family. The sound of the dirge and lament is heard at nearly every door, for within the last few days cholera has visited house after house, carrying with it sorrow, and ruin, and panic. People are hurrying their dead to the burial and burning grounds, while others are fleeing for safety from the place. Among the refugees there are not a few who have fled too late, only to be struck down on the road-side. Custom and apathy have so ordered that no pitying eye takes note of these things; no helping hand stretches forth succour to the suffering people in their affliction. Hopelessly left to shift for themselves, they die in all the horrors and pangs of a cholera death. But this is not all. The moral insensibility which distinguishes the authorities in their attitude towards the sufferings of the inhabitants is only surpassed by their supineness in permitting the causes of the pestilence to remain unremoved. The sanitary condition of the village has, out of India, no parallel in the civilized world. There are tanks supplying the inhabitants with drinking water, and at the same time receiving the contents of their latrines, ditches full of the blackest and most putrid of mire, the soil soaked with the foulest and most noxious of filth, while the air is laden with impurities and redolent with stinks. Literally, the place is a vast cess-pool—air, water, soil, are all alike poisoned. Here the external and most potent causes of disease are in full play, and grim and ghastly indeed are the effects.

"Cholera, the child of filth, revels in its home, gaining in strength and vitality, until conditions arise that will give it an opportunity of leaving its native soil and visiting other places and countries congenial to its tastes. Doubtless, the authorities will declare that the endemic or epidemic is due to seasonal influences, and that the deaths are not more than usual. This apology has ever and at all seasons been a convenient cloak for inaction; but how long is the truth to be suppressed for the ease of the authorities? Seasonal causes are myths of a by-gone day, and must give way to the irresistibly large accumulation of facts which evidence that polluted soil, polluted air, and polluted water, are alone the means of nurturing this fell disease, and that the removal of this pollution is alone the remedy. How long are the inhabitants to be deprived of a pure water supply, of drainage, and of measures of cleansing which are among the ordinary necessities of healthy aggregate life? It is idle to speak of the filthy habits of the people when the ordinary means whereby they can be clean are not placed within their reach. If municipal commissioners will not supply these three wants to their constituents, no amount of education or lecturing will effect a change. The change must come from those who are in municipal power—that is, from those who are in authority. At the present time, the sanitary condition of the suburbs of Calcutta is an outrage on humanity, a satire on civilization, and a disgrace to all concerned."

The closing words of the above report are even more trenchant than we dare use towards our authorities, however much tempted to do so. Now, what can we Egyptians learn from this picture of the sanitary conditions of our neighbours? What about the air we breathe? What about the state of the soil on which our habitations are built? What about our drinking-water supply? True—we have not cholera to deal with, unless when it is imported, but we have other death-producing diseases always present that are equally dependent for their existence and propagation on what feeds cholera, and other contagious diseases. Is it not true that the air in and about the majority of our dwellings is pestilential? And have we not evidence enough that the soil is saturated with filth, and is becoming more and more so every day? As to our drinking-water, if we have no means of storing the high Nile water, then for about three months in the year we have to drink what may be truthfully designated sewage-water; while during the other months of the year the river is only comparatively pure, by reason of the abundance of water which helps to nullify the bad effects of the organic matter thoughtlessly thrown into it by the natives, for there is no sacredness attached now to *old Father Nilus* to force the natives to keep the river undefiled. The wisdom of the ancient Egyptians is proverbial, but unfortunately for us, wisdom is not heredi-

tary; besides, the acquiring of it is by far too laborious and irksome for a race whose nerve-power is concentrated elsewhere than in the brain.

We have heard a great deal lately about the excessive death-rate throughout Egypt, but more especially in Cairo, and it may well attract our attention and draw out our concern. What are the best means for lowering it, and are they being used? In other departments of the Government we hear of great projects proposed and attempted at a great cost to the State, but the Public Health Department is in many respects like that of India—left almost out of count, although disease and death threaten the very existence of such a small nation as this is. India, with its population of 300,000,000, can afford to be well purged of its extra population from time to time by keeping up its unsanitary condition, but this is not the case with Egypt, which is at this moment suffering from scarcity of tillers of the soil. There is no lack of emigrants pouring into Egypt, but none of them can replace the fellahen. The cultivation of labourers ought then, one would think, to demand the serious study of our political economists as much, if not more so, than the cultivation of cotton and sugar-cane. We question very much whether this is the case, but the shoe will pinch more tightly some of these days, and soon, if intelligent and well-digested sanitary measures are not speedily adopted and faithfully carried out.

There is a remarkable similarity between Egypt and India in their sanitary conditions, and in the apathy of the authorities as to sanitary questions that involve the health and stability of the native population. One has only to walk through our cities and villages to be sensibly assured of the pollution of the air and soil; and in nine cases out of ten that pollution is far more intense inside the dens and houses of the natives than it is in the open streets. Even the European houses are not exempt from unsanitary stinks that might easily, by proper ventilation, be carried off and disinfected in the open air, instead of being allowed to permeate through the rooms, thereby destroying the health and stamina of the inmates.

We read of the filthy water-supply in India, and of deleterious effects on those who are obliged to drink it, and we are most astonished to find that an impure water-supply in Egypt is accompanied by a high death-rate. Just look at those green stagnant pools at low Nile that surround the Egyptian villages, that receive the filth and washings of the people, while at the same time they serve as a water-supply for man and beast. Can it be wondered at that the native population is dying out by a slow process of blood-poisoning? Here, in Egypt, there is no lack of polluted air, polluted soil, polluted water-supply; these, combined with the excessive heat of summer, ignorance, and crime, make our demographic statistics simply deplorable. The present sanitary condition of India has been designated an outrage on humanity. This may equally be said of the sanitary state of Egypt. Such things are not going to remain as they are. It becomes more and more evident every day that a Minister of Public Health is urgently needed in the Council of Ministers. There is no lack of sanitary measures to be passed, but as they are not well understood by a non-professional and non-scientific Ministry, and as they are not immediately remunerative, they are pigeon-holed, and thus remain a dead letter. We have raised our feeble voice in the cause of sanitary reform, and we have pointed out some of the ways by which the health of the people might be improved, and we are glad to find that sometimes our suggestions occupy the serious attention of the Sanitary Department; but as this Department is discredited at the Ministry, its proposed sanitary measures are generally sent back for further study, as they are considered but ill-digested and impracticable. As far as the climate of Egypt is concerned, little need be said further than that it is excellent. The heat of summer is no doubt sometimes excessive, and children suffer from the effect it has upon their milk-food, and many of them die from summer diarrhoea. This could be controlled somewhat if the people were less ignorant, and knew more about the proper preparation of food for the delicate stomachs of their offsprings. The cold of winter does not last long, so that chest disease is not common among the natives; but we have seen many cases that would have better health if they had more clothing. We are sure that a little more education would enable the natives to intelligently combat the evils arising from the climate. We consider that it is the duty of the Government to take the advice of its Sanitary Department as to the laying out of towns and villages, and as to the construction of individual houses, so as to secure a pure air for the people to breathe. Many of the wild beasts have better dens to live in than the Egyptians have houses. The honeycomb principle on which the houses of the villages are built is entirely wrong from a sanitary point of view. This could easily be rectified, as they are but crude brick huts at best. The Government is certainly responsible for a pure water-supply for man and beast all the year round, and it would be wise in fulfilling this duty to make arrangements beforehand for carrying off the waste. This has been effectually frustrated at Cairo by the deliberate destruction of all the sewers.

¹ *Journal of the Health Society for Calcutta and its Suburbs*, vol. iv., part 1, 1888.

Cairo is now supplied with an abundance of water, and occasionally during the winter there is a considerable downfall of rain; but without a single sewer this must inevitably lead to flooded streets, if to nothing worse.

The Public Instruction and Sanitary Departments could not have a better field than Egypt for distinguishing themselves in. There is so much that needs to be done. We are therefore very anxious to see both these departments in a more flourishing condition.

The following letters have been sent to a cotemporary medical journal:

[COPY.]

"To the Editor of the 'British Medical Journal.'"

"DEAR SIR,—In your issue of 13th October a paragraph appears to the effect that the Arabic medical journal *Al Shifa* had been suppressed by the Egyptian Government (*sic*), because it had reported a conversation on cholera between Professor Virchow and Dr. Grant Bey. This statement is not only utterly false, but highly injurious, I therefore beg you to give it a speedy denial, and as publicly as it has been made.

"When Professor Virchow honoured Cairo with a visit last winter I had the pleasure of meeting him several times, but as we are at one on the cholera question it never came up as a topic of conversation.

"I hope it won't be divulging a State secret to say that the Egyptian Government is undeservedly blamed for many foolish acts, but if it had really suppressed the *Shifa* as stated it would have unmasked itself.

"I cannot do better than refer you to the pages of the *Provincial Medical Journal* for an unvarnished account of medical matters in Egypt, more especially in connection with the fiery trials the *Shifa* has passed through.—I am, yours sincerely,

"Cairo,
"22nd October, 1888."

"J. A. S. GRANT BEY.

[COPY.]

"Au Redacteur du 'Journal Medical Britannique.'"

"SIEUR,—Je viens de lire, non sans étonnement, dans votre journal du 13 Oct. que mon journal medical Arabe *Al Shifa* a été supprimé par le Gouvernement Egyptien pour avoir rapporté une conversation sur le choléra entre le Prof. Virchow et Dr. Grant Bey.

"Cette nouvelle est tout à fait fausse; mon journal n'a point rapporté une telle conversation que d'ailleurs j'ignore absolument si elle a vraiment existé ou non. Je n'ai pas besoin aussi de vous dire, vu la fausseté de la raison impute comme cause de suppression, que mon journal continue à paraître régulièrement depuis sa fondation qui date du 15 Février, 1886, et tous mes efforts tendent à lui assurer une place numérotée dans la liste de ses confrères de longévité. Je compte sur l'esprit de justice de votre feuille qui voudra espace une place à ma lettre pour corriger cette erreur.—Agreez, Monsieur le Redacteur, mes considerations distinguees,

"Caire,
"22nd Oct., 1888."

"DR. SCHEMEIL, Redacteur du 'Shifa.'"

The Spirit of the Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—At a meeting of the above society on October 23rd (Sir E. Sieveking, president, in the chair), Dr. W. A. MEREDITH made some remarks on **Some Points affecting the Mortality of Abdominal Section, with Tables of Cases.** The purpose of the paper was to draw attention to certain points affecting the present death-rate after abdominal section; and with this view operations for ovarian growths were chosen as being to some extent representative of the entire subject under consideration. Mr. Meredith gave the results of his own work in this direction—viz., 126 operations being examined as regards the chief causes influencing the mortality. He made special reference to ten deaths which occurred in the series of 104 completed ovariectomies. Twelve successful operations for the removal of diseased uterine appendages were next reviewed, and the question of the medical treatment of such cases was considered. Brief illusion was made to two incomplete ovariectomies contained in a series of ten exploratory operations. In conclusion, it was shown that the increased success of abdominal section for ovarian disease during the past ten years was chiefly attributable to the diminution in the number of deaths from septicæmia, which in the author's opinion had been brought about by the abandonment of the practice of tapping, a better system of drainage, and the free washing out of the peritoneum.—Mr. A. Doran and Mr. J. K. Thornton joined in the discussion.—Mr. THORNTON remarked as to the incomplete exploratory operations, of which Mr. Meredith had reported four in 120 cases; that his own experience had been about the same—namely, twenty in 300 cases; and

he added that we should never attain to anything like the certainty in difficult abdominal cases which was being attained in cerebral cases, for in the brain, function and localisation diagnosis was becoming so much more accurate than it was possible it should become in the abdominal organs.

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MEDICAL SOCIETY OF LONDON, October 22nd (J. Knowsley Thornton, M.B., C.M., vice-president, in the chair). **Lacerated Wound of the Brain.**—Dr. FLETCHER BEACH read the notes of a case in which a boy was injured on July 20th by a window pole, being pushed into his cranium $2\frac{1}{2}$ inches above and 1 inch to the left of the occipital protuberance, penetrating to the depth of an inch. There was some rise in temperature, and even delirium. The pulse, too, remained high, and on August 16th a cerebral abscess broke through the wound, and a quantity of greenish pus escaped. The patient was able to leave the hospital well on September 5th. The treatment was confined to tincture of opium, chloral, and bromide of sodium.—Mr. KNOWSLEY THORNTON quoted a case related to him by Dr. Image, of Bury St. Edmunds. A boy aged seven was struck by a pitchfork, the prong of which entered the cranial cavity, carrying with it a quantity of filth. No treatment was adopted beyond carbolic acid, and the lad made a complete recovery.—Dr. SYMES THOMPSON and Dr. BEVOR also cited cases of the same sort, followed by recovery.—Dr. FORBES WINSLOW suggested that very probably symptoms would manifest themselves when the patients arrived at adult life.

Removal of Exostosis from Ear.—Mr. SHIELD narrated a case where he had removed an exostosis from the auditory canal by means of the chisel, after section and displacement of the cartilaginous portion of the canal. The essential points in its performance were the section of the auricle posteriorly where the pinna joins the cranium, the exposure of the cartilage of the canal, and the section and displacement of the latter from the bone. The chisel was applied to the bone at the base of the exostosis, which was thus easily removed. The auricle was replaced, sutured with catgut, and readily united in its former position. All pain disappeared the following day, and the hearing was most satisfactorily restored.—Sir WILLIAM DALBY congratulated Mr. Shield on the success of the operation, and said that there were two conditions in which the *modus operandi* was indicated—namely, when for any reason the external canal was too small, or was obstructed by swelling.

On a New Method of Raising the Epiglottis.—Mr. HOWARD gave a brief account of an elaborate paper prepared by him to show that when the epiglottis fell back over the laryngeal aperture, just as apnoea deepened into unconsciousness, traction on the tongue was altogether without any effect in raising the epiglottis. He recommended in such cases that the head of the patient should be allowed to hang over the edge of the table, forcible extension being applied if necessary. The discussion on the subject was adjourned until another occasion.

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BRITISH GYNÆCOLOGICAL SOCIETY, October 10th, 1888 (Arthur W. Edis, M.D., F.R.C.P., president, in the chair). **Vicarious Menstruation.**—Dr. J. INGLIS PARSONS read notes of a case of the above which occurred in a patient aged nineteen. Epistaxis first commenced at the age of sixteen, and occurred periodically for two or three days every month, and then after a profuse loss ceased for several months. Subsequently the epistaxis was so profuse, she came to the hospital. Every available means had been tried to excite the menstrual flow, but nothing had any effect. Dr. Parsons thought it fair to consider this a case of vicarious menstruation.

Foreign Bodies in the Vagina.—Dr. HEYWOOD SMITH exhibited a fir cone measuring some five inches in length, and the same in circumference, which had been removed from the vagina of a woman aged twenty-six. It had been introduced with the butt-end foremost.

Ruptured Tubal Pregnancy.—Dr. GRANVILLE BANTOCK exhibited specimens from the following case: The patient, aged twenty-six, had one child five years previously. Menstruation had been regular and moderate in amount, and often painful. The last period extended from March 10th to 13th. A month or so after that she had some morning sickness. For the last six weeks she had complained of a sharp pain in the left inguinal region. On June 18th she was seized with a sharper pain than she had ever had before. He had been called to the case three days afterwards, when an ill-defined tumour of small size could be felt in the neighbourhood of the uterus, and there was a slight sanguineous discharge. The patient was removed to the hospital, and the operation postponed till the next day. The abdomen was found to be full of blood; gestation had taken place in the left fallopian tube, which had ruptured, and foetus was lying in front of the uterus. Dr. Bantock at once secured the pedicle, and cleaned out the cavity. The

ovary and tube on the opposite side were found to be intimately adherent, and were also removed. The patient left the hospital well on the twenty-fourth day.—The PRESIDENT remarked that these cases occurred more frequently than were supposed; the difficulty lay in the diagnosis.—Dr. DOLAN (Halifax) was convinced such cases were very common. He had been enabled to arrive at a diagnosis in two instances.

Dermoid Tumours of the Ovary.—Dr. MANSELL MOULLIN exhibited a small dermoid the size of an egg, removed from a woman aged twenty-seven.

Uterine Fibroid, with Abscess of Ovary.—The PRESIDENT showed this specimen removed *post-mortem* from a patient aged thirty-nine.—Dr. Chalmers, Dr. Fenton, Dr. Bedford Fenwick, Mr. Lawson Tait, and others took part in the discussion of the case.

OPHTHALMOLOGICAL SOCIETY, Thursday, October 18th, 1888 (Henry Power, F.R.C.S., in the chair). **Partial Hyperostosis of the Frontal Bone.**—Mr. A. J. SILCOCK showed a case of partial hyperostosis of the frontal bone. The patient, aged twenty, was first seen at the Moorfields Hospital in May, 1883. She then presented a swelling over the left eyebrow, round in outline with smooth surface, hard, and bony to the touch. The left eye-ball was displaced forwards, downwards, and outwards. The swelling had existed for two years, and was said to be increasing in size; there was a history of a blow on the eyebrow. Iodide of potassium was given for some weeks without effect, and she was lost sight of till May, 1888, when the swelling had become considerably larger. On May 10th, much of the frontal bone was removed with trephine and gouge forceps, but it was found impossible to extirpate the growth. Since then no recurrence had taken place. He had shown the case on June 14th, and described it then as an ossifying sarcoma of the frontal bone; he brought it forward again because he desired to correct an error in diagnosis, as he now considered it a simple hyperostosis. A description of somewhat similar cases would be found in Virchow's work on tumours. Hyperostosis presented greater uniformity than did exostosis, and they did not show themselves in the form of a tumour properly so-called.

Living and Card Specimens were shown by Mr. SILCOCK: (1) Connective tissue tumour in each orbit; (2) sarcoma of both orbits.—Dr. TEMPEST ANDERSON: Instruments. (1) Simple eye speculum; (2) method of applying ointments to the eye; (3) a bench for operating on the eyes of children.—Mr. GREEN: Double proptosis.—Dr. W. J. COLLINS: Melanosis of conjunctiva.

SUNDERLAND AND NORTH DURHAM MEDICAL SOCIETY, October 18th, 1888 (G. S. Brady, M.D., F.R.S., president, in the chair).—Dr. BRADY, the president, gave an instructive address "On the Present Terrible Mortality amongst Young Children."

Sarcoma of Femur.—Mr. MORGAN showed a boy on whom amputation through the hip-joint had been performed for this disease, and Dr. SQUANCE exhibited microscopical sections of the growth, showing that it had originated in the periosteum.

Rupture of Lateral Ligament of Knee Joint.—Mr. ROBINSON showed a patient who had sustained this injury by a fall of a stone in a pit, which struck the leg on the outer side, just below the knee, and had also fractured the upper end of the fibula. There was a good deal of lateral mobility of the joint, but by the aid of steel supports the man was able to walk about.

CLINICAL SOCIETY OF LONDON, October 26th. **Empyema: Loss of Vision in the Right Eye; afterwards in both; Hemiplegia (Death): Cerebral Softening, involving especially the Angular Gyrus and Occipital Lobes.**—Dr. H. HANDFORD (Nottingham) read notes of this case. A young woman, aged eighteen, married two years, developed symptoms of left pleurisy, and in March, 1887, she was tapped, and about two pints of pus were evacuated. No drainage-tube was inserted, and the wound soon healed. She was delivered of a seven months' child, and six weeks later was admitted under Dr. Handford's care into the Nottingham General Hospital. On June 11th an incision was made in the left fifth interspace and the posterior axillary line by Mr. Wright, and a large quantity of pus removed; a tube was inserted, but the pleural cavity was not washed out. The patient improved; the discharge lessened, and the tube was left out, but subsequently had to be re-inserted. The discharge remained sweet. On July 29th the patient had a slight rigor, with rise of temperature. On August 13th she complained of pain and aching in her right eye without apparent cause. On August 14th, there was marked

loss of vision in the right eye. She could trace the movements of a hand, but not count the fingers. On August 16th, the fundus was pale and there were signs of slight neuro-retinitis. On September 5th, there was total blindness of the right eye, not even perception of light remaining. The pupil was dilated and insensible to light, but moved in sympathy with the left eye. The loss of vision was attributed to a cerebral cause, which it was hoped might be functional, as the patient developed at the same time a remarkable emotional condition. On September 8th, some dimness of vision was complained of in the left eye. September 19th, the eye soon began to improve; slight perception of light also returned to the right eye. She complained of loss of power on the right side, and when requested could move the right arm and leg freely, although with less power than the left. There was also some difficulty in speaking. A few days later she was taken home, and very shortly hemiplegia became complete, and there was absolute loss of sight in both eyes. She died about the end of September. At the inspection *post-mortem*, very extensive white (ischaemia) softening was found on both sides, affecting chiefly, but not confined to the white matter. That portion of the grey matter which derives its nutrition from the vessels of the pia mater was not much altered. There were no distinct abscesses in the brain or in any of the other organs; nor was there any heart disease, valvular or other. The microscopic appearances showed degeneration and disappearance of the nervous elements, copious infiltration, with leucocytes, and perforation of the neuroglia, forming a dense network. The president said that this very interesting case would assist in the unresolved question of the localisation of the senses of the vision and hearing, which had lately been somewhat again unsettled by the investigations of Professor Schäfer. He thought that the loss of vision was enough to settle that the affection was not of a hysterical nature. Drs. Hadden, Makin, and Barlow joined in the discussion on the case.

PATHOLOGICAL SOCIETY OF LONDON, November 6th, 1888 (Sir James Paget, F.R.S., president, in the chair). **Tubercle of Ovary.**—Dr. GRIFFITH showed a series of microscopical sections of an ovary which Dr. Galabin had removed from a young woman aged nineteen. The ovary was the size of a small apple, showing on section numerous small cysts filled with viscid fluid. There was no appearance of caseation. The fallopian tube was also enlarged. He mentioned that tubercular disease of the fallopian tubes was less rare than of the ovaries, and that the female genital organs were much less frequently affected by tuberculosis than the male, and that in the former it was of pathological interest rather than clinical. He also suggested some cases of suppurative salpingitis occurring in young women, in whom there could be no suspicion of gonorrhoea might be of tubercular origin.—Dr. A. MONEY mentioned a specimen from a young girl aged six years, in which the mucous membrane of the genital tract was infiltrated with tubercle.—Dr. EDMUNDS exhibited an ovary (card specimen) which microscopical examination showed to be undoubtedly tubercular.—Dr. ORMEROD mentioned a specimen that he had seen in which there was probably tubercular disease of the ovary.

Hydatid Cysts of the Left Cerebral Hemisphere.—Dr. HERMANN WEBER exhibited a brain and hydatid cyst which was taken from a man aged twenty-two years, who had suffered severe pain over the head with nausea and vomiting. He was rather apathetic, but without unconsciousness; he had some diminution of power on the whole of the left side, and especially of the external rectus muscle of the left eye; he had well-marked double optic neuritis (choked disc), and vision was much impaired. Sudden death occurred within six weeks from the beginning of the symptoms, and on the twelfth after admission into the German Hospital. The *post-mortem* examination exhibited a large hydatid cyst on the posterior part of the left hemisphere. Dr. Michel and Dr. Weber had both recognized the pressure of a tumour in or on the brain, but the absence of certain knowledge as to the locality had prevented them from attempting any operation.

Mediastinal Sarcoma in an Infant Fifteen Months.—Dr. ANGEL MONEY showed a rare specimen of sarcoma growing in the posterior mediastinum. It was the size of a man's fist, and projected chiefly into the right side of the thorax. During life the symptoms resembled those found in extensive collapse of the lungs. Microscopical examination showed the tumours to be a round celled sarcoma without any striated muscular tissue.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY, November 2nd, 1888 (William Travers, president, in the chair). **Suppurative Peritonitis Treated by Laparotomy.**—Mr. KEETLEY described two cases, the patients both being school girls, aged eleven years, treated in the West London Hospital, May, 1887, and August, 1888.

Surgical Aids and Appliances.

113.—CASE AND CONTENTS FOR USE IN RENDERING FIRST AID TO THE INJURED ON THE FIELD OF BATTLE.

By W. THORNTON PARKER, M.D., NEWPORT, R.I.

LATE ACTING ASSISTANT SURGEON, U.S.A., MEMBER OF THE S. JOHN'S AMBULANCE ASSOCIATION, ENGLAND, MEDICAL EXAMINER, 3RD DIST. R.I.

In the "Reference Hand-book of the Medical Sciences" (p. 722, vol. III.) is to be found an article by Surgeon Woodhull, U.S.A., describing a soldier's and sailor's clothing case, invented by me in 1885.



Case closed. Four compartments for Red Cross Sergeants.

The case is made of light canvas or waterproof cloth, and when completed it weighs but a fraction of the weight of the average knapsack.

It is manufactured as follows: A strip of cloth four feet long, or four feet six inches is a better length, by sixteen inches wide, is folded to make a pocket six or eight inches deep. This is done by making the covering flap lengthwise, and dividing it into three pockets by a few stitches across at a third of its length, making three equal divisions. Six buttons hold the flap in place. Loops at either end enable the soldier to wear it secured at the ends without it being rolled in blanket or overcoat. This case will hold two pairs of drawers, two flannel shirts, two pairs of stockings, towels and other extra pieces of clothing, and the "Soldier's book." It is useful in that it can be worn for days without giving fatigue, and the weight is so evenly distributed that the soldier does not suffer from carrying it or feel disposed to throw it away. Upon reaching camp the blanket can be unrolled, and the case hung up or thrown in the corner, the clothing remaining in the case clean and undisturbed. The case will be found useful as a pillow when folded. When the clothing is rolled loosely in the blanket only, upon reaching camp the blanket is needed, and the contents are likely to be scattered about the tent, and soiled or ruined with mud or rain. This clothing-case does away with the necessity of knapsack or clothing-bag, and can be manufactured easily and quickly, and at a trifling expense compared with the cost for the manufacture of knapsacks. The expense saved by the use of this case would be very great indeed in the equipment of even one regiment. No clothing-case could be more easily carried than one suspended from the shoulder. It can be used at all times, even in action, and would then offer considerable protection of the vital organs against musket falls. It is intended that this case be worn in the rolled blanket suspended from the left shoulder, giving the right arm full play, and allowing, as we have seen, the utmost freedom in the performance of the most important exercise of the manual of arms.

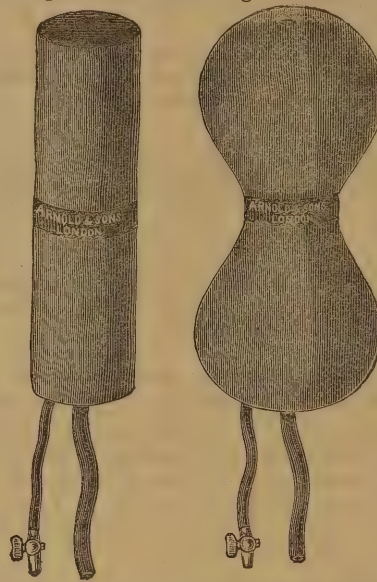
Such is the description of the case as originally invented for the use of the soldiers and sailors in general. In preparing a work on "Military First Aid to the Injured, and Stretcher and Ambulance Drill," it has occurred to me that for Red-Cross sergeants on the field no better case could be devised for carrying the necessary instruments and appliances to be used in first aid. The knapsacks, bags, and haversacks in use in the hospital corps of the European and American armies are clumsy and very tiresome. The constant stooping and rising positions assumed by the medical attendants in ministering to the sick are made doubly irksome by the clumsy and heavy bags and haversack suspended by a strap which often cuts deeply into the shoulder of the wearer. I have devised a case for a Red-Cross sergeant made in the same fashion, but of different material than that used by the soldiers and sailors, who wear theirs inside the rolled blanket. This case is to be made of brown waterproof cloth secured at the right side either by two straps or by strong cord. When required for use it can be quickly unslung and opened, and as quickly closed and slung into position again.

The contents are as follows: One hypodermic needle and rubber-corked bottle containing Magendie's sol. morphia; two flat medicine cases containing one dozen bottles each, ten inches long, four inches wide; one-half pound Lawton's absorbent cotton in a flat package; six woven bandages, antiseptic; six first aid triangular bandages; one case isinglass plaster; one inch tape; one package (in flat wooden box), surgeon's adhesive plaster; three sponges in waterproof bag; two tourniquets, field; two tourniquets, Esmarch; one tin box wax candles and matches, or folding lantern; one Red-Cross sergeant's dressing case. This case will be found of great practical convenience, and can be furnished at reasonable expense, and much below the cost of hospital knapsacks, bags, and haversacks already in use. A very good field stretcher can

be formed at once with three of these cases, either full or empty, secured upon two rifles. The ends of the cases being folded over the rifle stocks and secured beneath. Number one holding the butts of the rifle, as he would the stretcher handles. Number three holding the muzzles.

114.—NEW INFLATABLE DILATOR.

DR. JOHN WARD COUSINS has designed this dilator, which, as may be seen from illustration, consists of a central tube, enclosed in an elongated and inflated bag. An india-rubber band surrounds it in the



middle, and regulates its shape when distended with air. It should always be inflated after introduction, and this can be done very conveniently by using a small metal pump. The patient can be readily taught to put it in and remove it without assistance. The dilator is extremely useful after colic, as the central tube allows the escape of platus. I have employed it with success after both inguinal and lumbar operations. It forms a capital plug for the artificial anus, and some of my patients have worn it constantly with comfort. In other cases it has been retained in position for several hours daily. Dilators of smaller size are very serviceable in cases of empyema after the operation of incision. They can be introduced daily, and then inflated, and in this

way a free opening for drainage may be maintained. I am convinced that in many cases (chronic) the persistent use of the ordinary tube tends to keep up irritation, and sometimes actually prevents the contraction of small cavities. Under these circumstances Dr. Ward Cousins has found great improvement follow simple dilatation of the wound by pneumatic pressure.

Medical Miscellanea.

THE subject of our next illustration will be Jonathan Hutchinson, Esq. F.R.C.S.

Dr. A. W. Edis has been elected an honorary fellow of the American Gynecological Society.

Mrs. Louisa McKellar, of Argyle Lodge, Clapham Park, has left £45,000 to be distributed amongst the various charities round London.

Dr. Savage has been presented with a handsome silver bowl and a pair of candelabra, on his retirement as resident physician to Bethlem Royal Hospital.

A paper on the permanence of the radical cure of hernia was read by Mr. Mitchel Banks, of Liverpool, at the meeting of the Harveian Society, on November 15th.

A new winter garden and an extensive lawn tennis court were opened on November 12th, in connection with the Hotel Mont Doré, Bournemouth. The baths provided at the hotel are said to be among the most extensive and complete in Europe.

The first meeting of the British Laryngological and Rhinological Society took place on Wednesday, November 14th, at the Langham Hotel, Portland Place. After the evening sitting Mrs. Lennox Browne was "at home" to the members.

The Irish Medical Schools and Graduates' Association held a most successful meeting, followed by a dinner on October 31st, under the presidency of Professor Macalister, F.R.S.

The first annual meeting of the Metropolitan Police Surgeons' Association was held on November 8th, under the presidency of Mr. Mac Kellar, chief surgeon of the Metropolitan Police Force.

The "Summary of the Volunteer Medical Regulations" have been reprinted in pamphlet form, and may be obtained from the office of the *Provincial Medical Journal*, 10, Friar-lane, Leicester. Price sixpence.

Some medical men have been arrested in connection with the White-chapel murder. The unskilful way in which the mutilations have been made hardly point to medical men as the perpetrators.

The centenary of the Society for the Relief of the Widows and Orphans of Medical Men was celebrated on Monday last, October 29th, when the president, Sir James Paget, entertained the council and others to dinner.

We have to welcome a new journal, devoted to dermatology, edited by Mr. Malcolm Morris and Mr. H. J. Brooke. We wish it all success. The first number promises well. It is published by H. K. Lewis, Gower-street, London, at twelve shillings *per annum*.

The fortieth annual meeting of the American Medical Association (25th anniversary of the settlement of Newport) will be held from the first to the fourth Tuesday, the 25th of June, 1889. Committee of arrangements:—H. R. Storer, Chairman; C. F. Barker, M. E. Baldwin, C. A. Brackett, J. P. Curley, P. F. Curley, J. P. Donovan, H. Ecroyd, jun., V. M. Francis, T. A. Kenefick, G. M. Odell, F. H. Rankin, W. C. Rives, jun., S. H. Sears, W. S. Sherman, H. E. Turner, W. Thornton Parker, local secretary. Associate committee, appointed by the R. I. Medical Society: G. D. Hersey, W. H. Palmer, G. T. Swarts, of Providence.

Correspondence, Notes, and Queries.

Communications, Books, etc., should be addressed directly to the EDITOR, "The Provincial Medical Journal," Horton House, Halifax.

Matters of business should be addressed to the Publisher, at the Offices, 10, Friar Lane, Leicester.

We cannot undertake to return rejected MSS. unless stamps sufficient for their postage are enclosed.

We shall be glad to receive reports of Medical Vacancies, Appointments, Meetings of Societies, etc.

Papers containing passages for consideration should be marked.

Correspondents must please attest their communications with their proper name and address (not necessarily for publication).

Contributions must be written on one side only of the paper.

MSS. intended for publication to be sent in not later than the 16th of the month.

The insertion of any letter in these columns cannot be taken as necessarily indicating our adhesion to the views or statements therein expressed. The same remark applies to articles to which a name or nom-de-plume is attached.

GREENE PACHA ET LE "SHIFA."

To the Editor of "The Provincial Medical Journal."

SIR,—Drs. Grant Bey and Schmeil are unfortunately imbued with the idea that some person or persons in my department are hostile to them and their efforts to improve medical knowledge in Egypt, and that I, as *Nominal* Director, have been made use of, as a cat's paw, in the nefarious game which has for its object their extinction. This is entirely wrong, for I can assure you, sir, that no one in the Sanitary Administration entertains the slightest jealousy of one or the other of these gentlemen, or would do anything to injure any little attempt they might make with the object of imparting instruction. When Dr. Schmeil came and begged me to contribute towards his Journal, I promised to support him

if allowed by the finance controllers, for I thought that if the *Shifa* did little good it could at all events not do any harm, and the result was a flow of Napoleons towards his coffers, till we were ordered by the Council of Ministers to discontinue all subscriptions to the press, and my representative was obliged to include the *Shifa* and the *Saha* with the rest: nor would the result have been different had I been on the spot.

The letter No. 935 published in your October issue was simply and solely the outcome of goodwill towards Dr. Schmeil and his bantling, and I still think that using it for the purpose of extracting damages from my attenuated budget was not in accordance with the *high falutin* I have already pilloried. I enclose copies of documents which prove my position conclusively, but I could not ask you to print them unless you like, as they would take up too much of your valuable space.

I perceive that Dr. Grant Bey is beginning to recover from the castigation he received last year, but I have not sufficient time to devote to attempting to unravel the meaning of his curiously involved sentences. One of his statements in your October number is, however, sufficiently clear, and to it I must allude. He says in paragraph 11 of his "Notes from Egypt," that a letter of authorisation from the Minister of the Interior to continue subscriptions to the *Shifa*, for 1888-89, was kept secret at the Sanitary Department! This is sheer imagination: no such letter ever existed.—Yours truly,

H. R. GREENE.

Cairo, 9th Nov., 1888.

[This correspondence must now cease.—ED., P.M.J.]

DR. WOLFE'S OPINION OF THE TREATMENT OF ULCERATION OF THE CORNEA AND KERATACONUS BY THE ACTUAL CAUTERY.

To the Editor of "The Provincial Medical Journal."

SIR,—Everybody who has been to school knows that the crafty Odysseus was no surgeon, but a great hero, a man full of resource. When he found himself and his party prisoners in the cave of Polyphemus, the Cyclops, who had made a breakfast of some of his companions, and was reserving him and the others for a future occasion, Odysseus applied the actual cautery to his host with successful results, for it enabled them to slip out of the clutches of the monster. As corroborative evidence we have the statement of Virgil, that Æneas and his companions, sailing along that coast, saw him coming down to the sea-shore, feeling his way by means of his stick, and washing the empty socket with salt water.

It ought to be plain to anyone that my object in comparing the treatment by cautery to Odysseus' treatment of Polyphemus was, to put it emphatically, that when we wish to produce disorganization of tissues, as after the removal of cancer from the orbit, or for the cure of nævus, the cautery may be resorted to with success; but in ulceration of the cornea, when our object is to treat the ulcer without leaving any corneal opacity, or as little as possible, then the use of the cautery is most objectionable. With regard to the use of the cautery in kerataconus, it belongs to those contrivances in ophthalmic surgery which, after many human eyes have been sacrificed by their application, have ultimately been abandoned as worse than useless. It is now admitted by every reasonable surgeon that the application of the cautery in any shape or form will do no good. You may alter the conical curvature, but the confused vision becomes more confused.

I indeed my remarks did not apply solely to the authors of the papers in question, but to a class of authors who bring to meetings exploded materials. Next time I have occasion to criticise similar proposals, I shall speak in plain language, and not in parables.—I am, faithfully yours,

J. R. WOLFE.

GERMAN DOCTORS VERSUS SIR MORELL MACKENZIE.

To the Editor of "The Provincial Medical Journal."

SIR,—In the attitude of the German physicians towards Sir Morell Mackenzie there is nothing unusual with that people. Any man acquainted with the proclivities of the Germans might have easily predicted as to what would be the upshot of the anomaly of a foreigner being entrusted with the treatment of a royal German patient. So thoroughly saturated with the feeling of nationality are the Germans, and so impregably fortified against the encroachments and rivalship of other nations, that the advent of the British specialist could not act otherwise than to fill them with wonder and discontent. As the smoke of animosity would be mixed up with their estimate of the favoured intruder, and as envy always kens objects through coloured glasses, no act on the part of Sir Morell could be viewed in its proper light. Moreover, by the tendency of their want of experience in laryngeal surgery to enable them to comprehend the *modus operandi* of the specialist (a century ahead of them) the German physicians would be propelled to drift still farther into erroneous inferences and denunciations

of their foreign competitor. Outside of Germany, in no part are the peculiarities of the German character better known than in the cities of New York and Brooklyn, where for nine years the writer practised amongst them. There is much in the Germans we English might learn and copy from for our national interest. In that Republic no doubt could be entertained that the Germans are the most prosperous of any nation. The cosmopolitan English certainly, in a financial respect, make the least headway; the reasons, or the causes, will be seen presently. Whilst not a solitary society exists formed by and for the English settlers, the Germans, by their wide-spread and powerful organizations, are united almost to a man; and though, as a rule, their political measures are just and reformatory, no zealous exertion on their part is wanting to fill every office with their own clan. Confessedly, it is a most difficult undertaking to get a verdict against one of his own people from a German judge. Rather than patronize other nations the Germans are noted for fetching their groceries, etc., from miles away. When 30,000 men, out of employment and on the point of destitution, parade the streets of New York, the German contractors will deliberately import from Germany large numbers to do their work. A young man, seventeen years of age, from Germany, lands at the port of New York and at once is employed in a German provision store. Every spare minute of his time is occupied with an "Ollendorff's German-English Grammar," and shortly he can speak broken English. The most signal industry, shrewdness, and thrift characterizes him. At the age of twenty-four he is married to a German. He then enters into business on his own account, while Germans from far and near flood him with patronage. Dollars raining upon him in other five years, he owns with other property a large block of houses; whereas if, on the other hand, he had married a woman exterior to the Teutonic family, he would have "come to grief" if not to utter ruin. Whilst the majority of Germans are totally opposed to tendering their patronage to other nations it is a curious fact, though somewhat paradoxical, every other nation will purchase from them on a large scale. The German restaurants, lager beer saloons, and groceries are frequented by persons of every nationality. This is effected by their making their scale bearing the weights "kick" the beam; by their trading for small profits, and by their being homogeneous and obliging to customers. Not only is this people conceited beyond measure in their comparisons of German doctors with other physicians, but even their practising chemists and midwives are made invulnerable. Woe to the medical man who will attempt to stop or disparage any one of the numerous German charlatans! During the Franco-German war, all such as were able to bear arms, were commanded to return to fight for their "fatherland," or they would be disowned for ever; and from all parts of the union obedience was observed to the mandate.

Though generally unassuming and unaggressive, yet when provoked Germans will use the dagger and exhibit the ferocity of the lion. If, indeed, the Teutons are patient, philosophical and ingenious as mechanics, as surgical operators, by their lymphatic natures, they are deprived of the agility and tact of the Briton and the Frenchman. In their combat with the English specialist, it is quite prognostic that the German physicians will be worsted. Evidence that the noble patient lost confidence in them will pave the way for his victory. Who ever read of the galvanic cautery being applied daily, for a fortnight, to an ulcer in any part, much less to one in the interior of the larynx? What other result could follow such a procedure than a benign being changed into an malignant affection? Surely, this tampering and violence will baffle the attempt to find its equal in the annals of medical electricity! As the history of the symptoms, treatment, etc., is detailed in Sir Morell's pamphlet, which is a masterpiece of narration and candour, self-defence, and polemic ability. Every medical man should purchase a copy and read it for himself.—Yours truly, M.D. (U.S.A.)

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19. The Western Medical and Surgical Reporter.
20. The South Western Medical Gazette (Louisville).

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22. The Practitioner.
23. The Medical Chronicle.
24. The Medical Press and Circular.
25. The Journal of Microscopy and Natural Science.
26. The Indian Medical Gazette.
27. The Australasian Medical Gazette.
28. The Hospital Gazette.
29. The Journal of Rhinology.
30. The Birmingham Medical Review.
31. The Ophthalmic Review.
32. The Pharmaceutical Journal.
33. Public Opinion.
34. Health.
35. The Chemist and Druggist.
36. The British and Colonial Druggist.
37. The Australasian Journal of Pharmacy.
38. The Nursing Record.
39. Diet and Hygiene.
40. The Illustrated Medical News.
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42. The British Journal of Dermatology.

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